ORDER NO. VSD9006M603

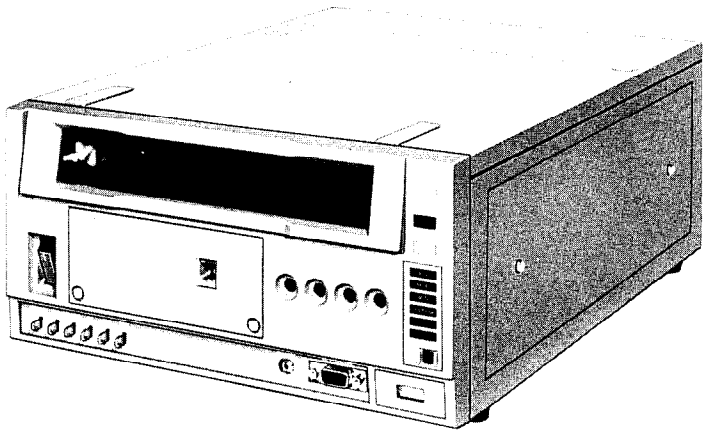
Service Manual

Operating Instructions
Technical Descriptions
Mechanical Adjustment Procedures
Electrical Adjustment Procedures
Block Diagrams
Schematic Diagrams
Circuit Board Diagrams
Exploded Views
Replacement Parts List

Panasonic VHS PAL Hi-Fi

Duplicator

AG-6850H -E -B -A



SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
Power	Source: AC 220~240 V, 50~60 Hz	Audio	Output Level: AUDIO OUT (phono): −8 dB 1 kΩ unbalanced
	Consumption: Approx 30 watts		Signal to Noise Ratio: 48 dB (Normal/Dolby NR ON)
Video	Head: 2 rotary heads, helical scanning system (49 μm × 2)		Dynamic Range: 90 dB (Hi-Fi)
	Luminance: FM azimuth recording		Frequency Response: 20 Hz~20 kHz (Hi-Fi audio track) 50 Hz~10 kHz (Normal audio track)
	Color signal: Converted subcarrier phase shift recording		
	Input Level: VIDEO IN (BNC) 1.0 Vp-p 75Ω unbalanced		Wow Flatter: 0.18% (Normal Audio) 0.005% (Hi-Fi Audio)
	Output Level: VIDEO OUT (BNC) 1.0 Vp-p 75Ω unbalanced	Television System	CCIR Standerd (625 lines, 50 fields) PAL Colour Signal
	Signal-to-Noise Ratio: more than 44 dB (Colour)	Tape Speed	23.39 mm/sec Record Time: 180 min. with NV-SE180E FF/REW Time: Approx 3 min. with NV-SE180E
	Horizontal Resolution: more than 240 lines (Colour)		
Audio	Head: Normal Audio/Control: 1 stationary head Hi-Fi Audio: 2 rotary heads (36 μm × 2) Erase: 1 full track erase	Tape Format	VHS Format Tape width 1/2" (12.7 mm) high density tape
	Track: 2 track (Normal-stereo), 2 channels (Hi-Fi sound-stereo)	Operating Condition	41°F (5°C)~104°F (40°C) (Temperature) 35%~80% (Humidity)
	Input Level: AUDIO IN (phono): −8 dB 100 kΩ unbalanced	Dimensions	270 (W) × 144.5 (H) × 370 (D) mm
		Weight	Approx 6.8 kg

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Panasonic

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INTRODUCTION

This service manual contains all the technical information which will allow service personnel to understand and service this Panasonic Recording/Playback Duplicator AG-6850H.
The model AG-6850H brings features like the Intelligent Quest (IQ) tape transport mechanism, Hi-Fi stereo sound, highly durable lower cylinder.
And by the use of the 3 remote control system (34pin Remote Control, Serial Remote Control, Remote Control), Various use is obtained.
Whereas, it has many optional accessories (Remote Controller, Cassette Auto Changer, Audio Level Meter, ID Generator, Tape Evaluator etc...).
These features in addition to the basic VHS format make the AG-6850H an ideal unit for business application.

CONTENTS

SPECIFICATION ..... Cover

OPERATING INSTRUCTIONS
Features 2
Inspection 2
Control and their Functions 3
Connections 6
AG-AM10 / AG-AM20 (Option) 7

DIMENSIONS 6

OPERATION
Tape Run Lamp 8
Rec Lamp 8
Stand-by Jack 8
Auto Off Jack 8
Changer Connector 8
Video Loop Through Connection 8
Audio Loop Through Connection 9
Auto Off / Stand-by Connection 9
Remote Connector 10
Remote Controller 11
Remote Connection 12
Connection Method 13
Connecting to the Audio Jacks 14
Installing to Audio Meter (AG-AM10) 1-1

CIRCUIT DESCRIPTIONS
Internal Switch and Indication 1-1

DISASSEMBLY PROCEDURES
1. Disassembly Flow Chart 2-1
2. Detailed Disassembly Method 2-1

REGULAR MAINTENANCE
1. Parts Location 2-6
2. Maintenance Chart 2-7
3. Maintenance Procedures 2-8
   3-1. How to Eject Manually 2-8
   3-2. Cylinder Maintenance Procedures 2-8
   3-3. A/C Head Maintenance Procedures 2-10
   3-4. Full Erase Head Maintenance Procedures 2-11
   3-5. Pressure Roller Maintenance Procedures 2-11
   3-6. Reel Motor Unit Maintenance Procedures 2-11
   3-7. Main Brake (S), (T) Unit Maintenance Procedures 2-12
   3-8. Loading Motor Unit Maintenance Procedures 2-12
   3-9. Head Cleaning Pad Unit Maintenance Procedures 2-12
   3-10. Mode Switch Maintenance Procedures 2-12

MECHANICAL ADJUSTMENT

1. Servicing Fixtures & Tools 2-14
2. Tape Interchangeability Adjustment Procedures 2-15
   - 2-1. Adjustment Flow Chart 2-15
   - 2-2. Coarse Adjustment of the Tape Guide Post Height (P2 and P3) 2-16
   - 2-3. Adjustment of the Pull-out Post.(P5) Height 2-17
   - 2-4. Coarse Adjustment of the A/C Head Height 2-18
   - 2-5. Tilt & Azimuth Adjustment of the A/C Head 2-18
   - 2-6. Fine Adjustment of the Tape Guide Post Height (P2 and P3) (Linearity) 2-19
   - 2-7. Fine Adjustment of A/C Head Height 2-20
   - 2-8. Coarse Adjustment of the A/C Head Horizontal Position (X-Value) 2-20
   - 2-9. Fine Adjustment of the A/C Head Horizontal Position (X-Value) 2-21
3. Other Mechanical Adjustment Procedures 2-21
   - 3-1. Measurement and Adjustment of Back Tension 2-21
   - 3-2. Height Adjustment of The Reel Tables 2-22
   - 3-3. Adjustment of The Capstan Thrust Gap 2-22
   - 3-4. Measurement and Adjustment of the Brake Torque 2-23
   - 3-5. Confirmation of Pressing Force and Position Adjustment of Pressure Roller Unit 2-24
   - 3-6. Adjustment of FG Head Gap 2-24
4. Assembly and Adjustment Procedures of Mechanism 2-24
   - 4-1. Confirmation of Alignment Condition 2-24
   - 4-2. Assembly Procedures of Sub Cam Gear, Ring Gear and Detent Arm 2-26
   - 4-3. Assembly Procedures of Main Cam Gear and Pinch Speed Down Gear 2-26
   - 4-4. Assembly Procedures of Loading Cam Gear and Retainer Gear 2-26
   - 4-5. Assembly Procedures of Center Gear 2-26
   - 4-6. Assembly Procedures of Main Lever and Cam Follower Arm Unit 2-27
   - 4-7. Assembly Procedures of Loading Gear (T), Loading Gear (S) Sector Gear 2-27
   - 4-8. Assembly Procedures of Connection Gear 2-27
   - 4-9. Assembly Procedures of Mode Switch and P5 Pull Out Sector Gear 2-28
   - 4-10. Assembly Procedures of Pinch Cam and Pressure Roller Unit 2-28
   - 4-11. Assembly Procedures of Gear Base Unit 2-28
   - 4-12. Reinstalling of Cassette Compartment 2-28

ELECTRICAL ADJUSTMENT PROCEDURES

1. Test & Service Equipment 2-32
2. Adjustment Procedures 2-32
   - 2-1. How to Read The Adjustment Procedures 2-32
   - 2-2. Servo section 2-32
   - 2-3. Audio Section 2-33
   - 2-4. Video Section 2-35

LOCATION OF TEST POINS AND CONTROLS 2-38

CIRCUIT BOARD LAYOUT 2-40

BLOCK DIAGRAMS

- Overall 3-1
- System Control 3-2
- Servo 3-5
- Video 3-8
- Hi-Fi Audio 3-11
- Reel Servo 3-13

SCHEMATIC DIAGRAMS AND CIRCUIT BOARD

- SW Power (1), SW Power (2) and AC Line Connection 4-1
- SW Power (1) C.B.A., SW Power (2) C.B.A. and AC Line Connection C.B.A. 4-2
- Servo 4-7
- Motor Base 4-9
- System Control 4-11
- Mode Select 4-13
- System Control & Servo C.B.A., Rear Jack (1) C.B.A., 34P Connection C.B.A., Mode Select C.B.A., Motor Base C.B.A., Remote Control Jack C.B.A., 9P Connection C.B.A., Front (1) C.B.A. and System Control Sub C.B.A. 4-17
- Audio & Video C.B.A., Rear Jack (2) C.B.A., Font (2) C.B.A., Modular Jack C.B.A. and ID Dummy C.B.A. 4-20
- Video 4-23
- Audio 4-25
- Head Amp 4-27
- Head Amp C.B.A. 4-29
- Reel Servo C.B.A. 4-31
- Reel Servo 4-33
- Interconnection 4-36

EXPLODED VIEWS

1. Chassis Parts Section 5-1
2. Moving Mechanism Section 5-2
3. Cassette Compartment Section 5-3
4. Chassis Parts Section 5-4
5. Casing Parts Section 5-5
6. Packing Parts Section 5-6

REPLACEMENT PARTS LIST

1. Servicing Fixtures & Tools list 5-7
2. Mechanical Replacement Parts List 5-7
3. Electrical Replacement Parts List 5-9

Features

Model	Features
AG-6840H	Recording only with High-Solidarity Cylinder
AG-6850H	Recording and playback with High-Solidarity Cylinder

Series and Serial Remote Recordings (special for dubbing use)

■ **Series Remote Recording**

- By using the Remote Controller AG-A600 (option), it is possible to control the AG-6840H/6850H via the 34 Pin Remote Control Connector.
- By using the Remote Controller AG-A11 (option), it is possible to control AG-6840H/6850H independently.

■ **Serial Remote Recording**

- By using the Serial Remote Transmitter Unit AG-IA12 (option), it is possible to control a maximum of 500 AG-6840H/6850H units at a time.

Hi-Fi Audio Recording

The Hi-Fi recording system records an audio signal that has been converted to a wide-band FM signal. Hi-Fi audio recording uses 2 rotating heads exclusively for audio recording.

Audio Input Jacks for Normal Audio and HI-Fi Audio

There are independent input jacks for normal audio and Hi-Fi audio on the rear panel.
(AG-6850H is also provided with independent output jacks for normal audio and Hi-Fi audio.)

Loop Through Output Jacks (Loop Through Type, 75 ohm Termination)

As this unit is provided with jacks which can bridge video and normal audio inputs, it is possible to expand the system without installing additional distribution amps.

AUTO OFF and STAND-BY Output Jacks

- During the AUTO OFF mode, AUTO OFF Jack outputs a signal to indicate an error has occured.
- The STAND-BY Jack outputs a signal which can identify the VTR's operations shifting to another mode.

Test Terminals

The output of the video and Hi-Fi Audio heads, Phase Generator and Drop Out Compensation can be confirmed with an oscilloscope at the test terminals provided on the front panel.

Mode Selection

The following modes can be selected using the internal switches or the Serial Remote Transmitter Unit AG-IA12 (option).

Modes	Selectable by
• Video AGC • Hi-Fi Audio Recording • Audio Limiter • Dolby NR	Internal Switch or Serial Remote Transmitter Unit AG-IA12 (option)
• Short FF • Cassette In REW • Changer Start • Direct Rec • Rec Auto Off • Buffer	Internal Switch

Audio Level Meter (option)

Audio Level Meter (option) is convenient for monitoring the audio recording levels.

Compact and Easy to Carry

Other Characteristics

- A Dolby NR* System is built in for normal audio.
- An optional Cassette Auto Changer AG-CL78/AG-CL68 can be mounted to this unit.
  For details, refer to the Operating Instructions of the AG-CL78/AG-CL68.

When installing the Cassette Auto Changer or setting the internal switches, refer to a qualified service personnel.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
* "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Optional Accessories

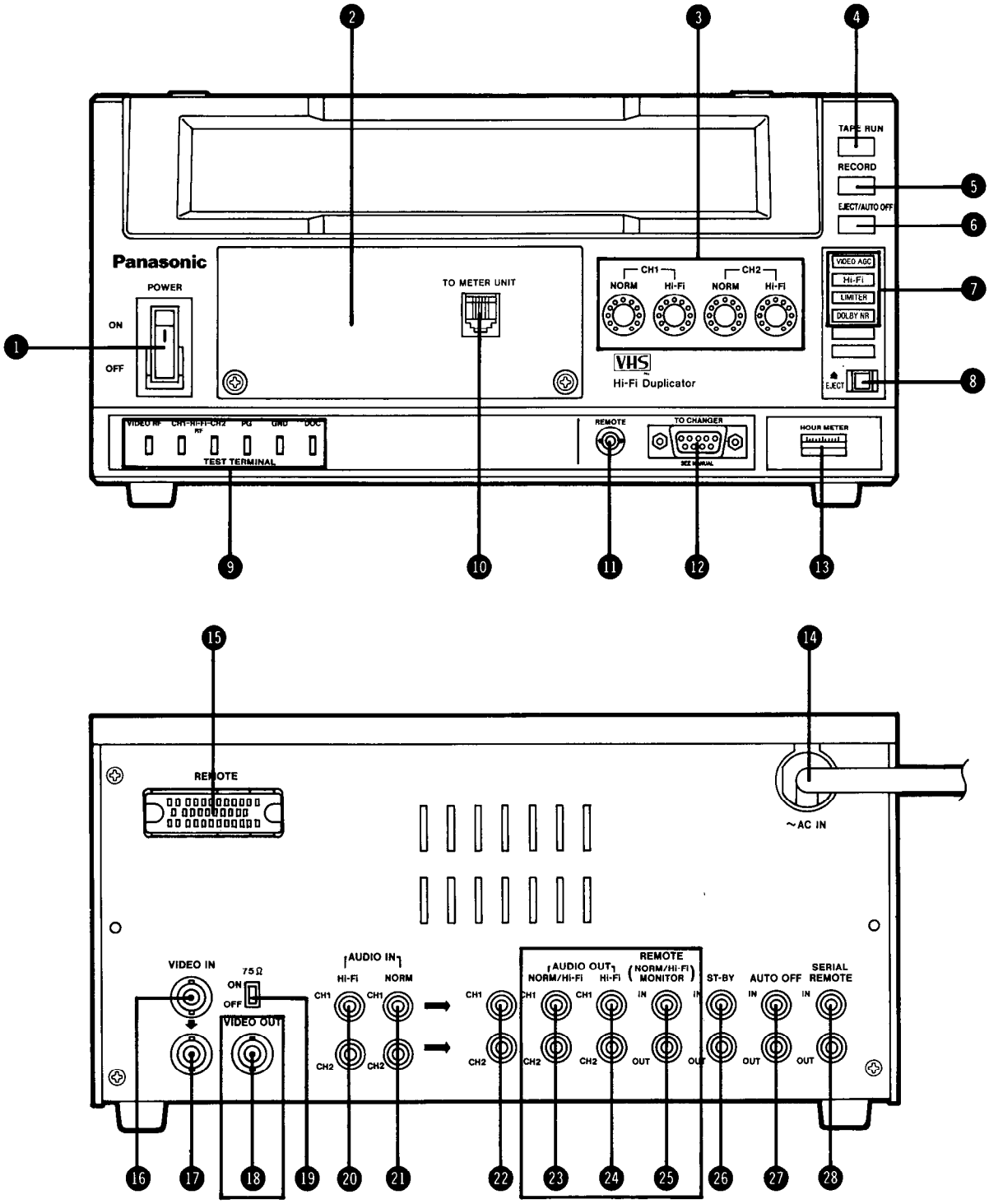
- Remote Controller AG-A600 (34P)
- Remote Controller AG-A11 (M2 Plug)
- Cassette Auto Changer AG-CL78/AG-CL68
- Serial Remote Transmitter Unit AG-IA12
- Audio Meter AG-AM10
- Audio Meter Unit AG-AM20
- ID Generator AG-ID10
- Tape Evaluator AG-TE10

For details of conections or installation, refer to the Operating Instructions for each option.

AG-6840H is designed exclusively for 3-hour recording while AG-6850H is 3-hour recording and playback.

WARNING: Unauthorized recording of copyrighted television programmes, films, video tapes and other materials may infringe on the rights of copyright owners and be contrary to copyright laws.

Controls and their Functions



❶ Power Switch
When set to the ON position, the Eject/Auto OFF Lamp ❻ lights if no cassette is inserted.

❷ Peak Meter (Option)
These meters indicate the peak audio input level.
Use the level controls to adjust the input signal as follows:
- Supply a standard signal to the Audio Input Jack. Adjust the level so that the needle of the level meter indicates as below.
  Normal Audio: Hi-Fi Position
  Hi-Fi Audio: Hi-Fi Position
- Supply normal sound and check that the needle of the level meter does not exceed the "0" position.
- Dolby NR Level: The Dolby NR level is located at the "–6" position.

❸ Audio Input Level Control (CH1/CH2)
These controls are used to adjust the audio input level while monitoring the Audio Meter AG-AM10 (option) or Audio Meter Unit AG-AM20 (option).

❹ Tape Run Lamp
Lights: During FF or REW mode.
Flashes: During cassette tape with CTL signal is running.

❺ Record Lamp
Lights: Recording mode
Flashes: No signal is input in the recording mode, or when the "Rec Auto Off" (internal switch) is turned ON.

❻ Eject/Auto OFF Lamp
Lights: No cassette is inserted
Flashes: Malfunction has occured to the tape transport system. The unit will not operate.

❼ Mode Indicator Lamps
VIDEO AGC: Lights when the "Video AGC (Automatic Gain Control)" is turned ON.
Hi-Fi: Lights when the "Hi-Fi Audio Recording" is turned ON.
LIMITER: Lights when the "Audio Limiter" is turned ON.
DOLBY NR: Lights when the "Dolby NR" is turned ON.

❽ Eject Button

❾ Test Terminals
An oscilloscope can be connected to these terminals for confirmation of Video and Hi-Fi Audio RF output during playback, as well as Phase Generator and Drop Out Compensation.

❿ To Meter Unit Connector
To confirm the audio recording meter level, connect the Audio Meter Unit AG-AM20 (option).

⓫ Remote Control Connector
Exclusively for the Remote Controller AG-A11 (option).

⓬ To Changer Connector
Connect the VTR Connector of the Cassette Auto Changer AG-CL78 or AG-CL68 (option).

Pin No.	Signal	Pin No.	Signal
1	+20 V Output	6	AUTO OFF Output
2	+5 V Output		
3	GND	7	EJECT SW (1)
4	CAS IN Output	8	EJECT SW (2)
5	CAS OUT Output	9	START Output

⓭ Hour Meter
Indicates the head rotation time (maximum 5000 hours).

⓮ Remote Control Connector (34P)
Connect to the Remote Controller AG-A600 (option).

Pin No.	Signal	Pin No.	Signal
1	REC SWITCH	19~20	——
2	PLAY SWITCH	21	EJECT SWITCH
3	FF SWITCH	22	——
4	REW SWITCH	23	REC HOLD
5	STOP SWITCH	24	PLAY HOLD
6	——	25	FF HOLD
7	PAUSE SWITCH	26	REW HOLD
8	CASSETTE IN	27	STOP HOLD
9~11	——	28	——
12	GND	29	PAUSE HOLD
13~17	——	30~33	——
18	REEL PULSE	34	+12 V (Max. 100 mA)

- HOLD signals are output by open collector circuits. Therefore, user's remote controller circuit for these pins should be designed as open collector output circuits or Transistor Transistor Logic (TTL) level.
- Number 34 pin (+12 V) should be used only for our remote controller AG-A600.

⓯ AC Power Cord
3-pin grounded type. Do not defeat its purpose.

⑯ **Video Input Connector (BNC type)**

⑰ **Video Input Connector (Loop through type)**
This connector can bridge the Video Input Connector ⑯.

AG-6850H only

⑱ **Video Output Connector (BNC type)**

⑲ **Terminate ON/OFF Switch**
Set this switch to OFF when performing series connection of video input signal. Normally place to the ON position.

⑳ **Hi-Fi Audio Input Jacks**

㉑ **Normal Audio Input Jacks**
When the input is connected to these jacks and "Hi-Fi Audio Recording" (internal switch) is set to ON, Hi-Fi audio recording is also done automatically.

㉒ **Audio Input Jacks (Loop through type)**
These jacks can bridge the Normal Audio Input Jacks ㉑.

AG-6850H only

㉓ **Audio Monitor Output Jacks**
These are audio output jacks for normal audio and Hi-Fi audio.

㉔ **Hi-Fi Audio Output Jacks**
Exclusively for Hi-Fi audio.

㉕ **Normal/Hi-Fi Monitor Remote Control Jacks**
IN: An ON/OFF Remote Control Switch is connected for monitor selection of the audio signal.
ON: Hi-Fi audio
OFF: Normal audio
OUT: For series connection of ON/OFF control signal.

㉖ **Stand-by Jacks**
This jack outputs signal which indicates that the unit is in the modes besides EJECT, STOP, REC/PLAY and REC/PLAY PAUSE.

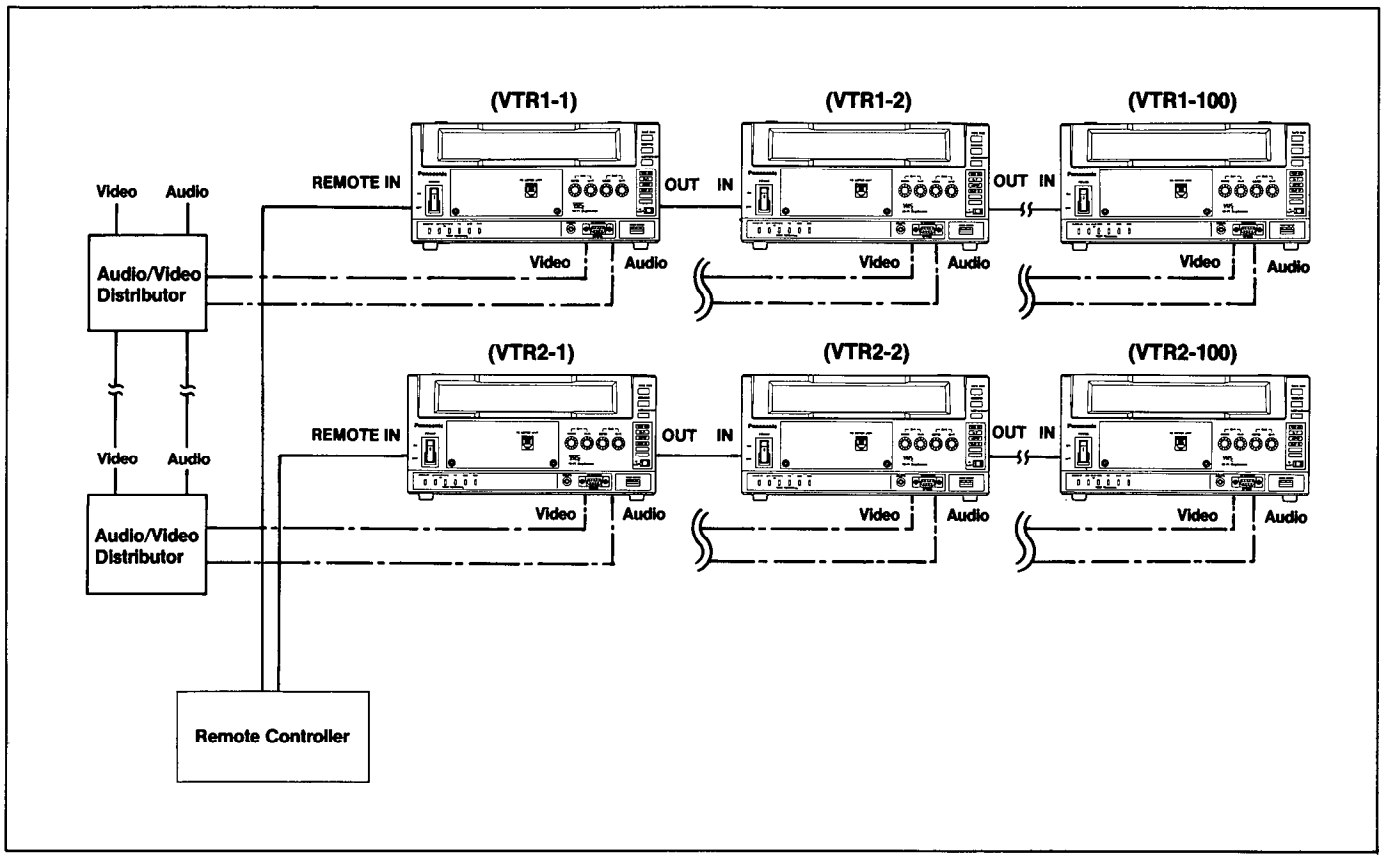
㉗ **AUTO OFF Jacks**
This jack outputs signal which indicates that an error has occured.
In this case, the unit will not operate.

㉘ **Serial Remote Control Jacks**
Exclusively for the Serial Remote Transmitter Unit AG-IA12 (option).

Note:
■ Do not perform the REVIEW operation when using the AG-6840H. This operation is used only during maintenance.

Connection

Basic Remote Recording



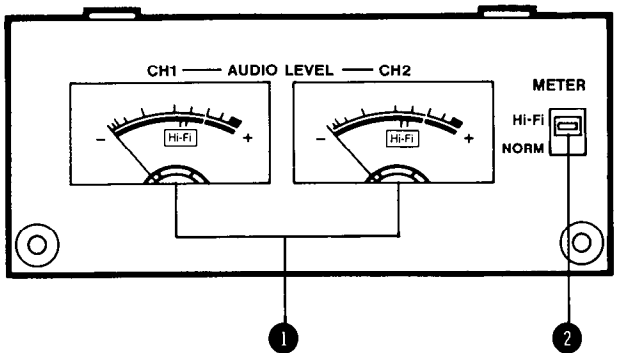
Notes:

- Be sure to use the AG-6840H/6850H output signals with this system. Improper operation may occur if any other output system is used.
- Keep the connections to a maximum length of 200 m for one remote output connector and to a maximum of 100 units. Otherwise, waveform distortion may occur.
- •With one Audio/Video Distributor, up to 10 connections are available.
  •With one Audio/Video Connector of the Audio/Video Distributor, series remote connection of up to 3 units is available. (This means, with one Audio/Video Distributor, it is possible to connect a maximum of 30 AG-6840H/6850H units.)
- When operating the unit using the remote controller, leave a gap of at least two seconds between each successive press of the buttons of the controller.

AG-AM10/AG-AM20 (Option)

■ Audio Meter AG-AM10

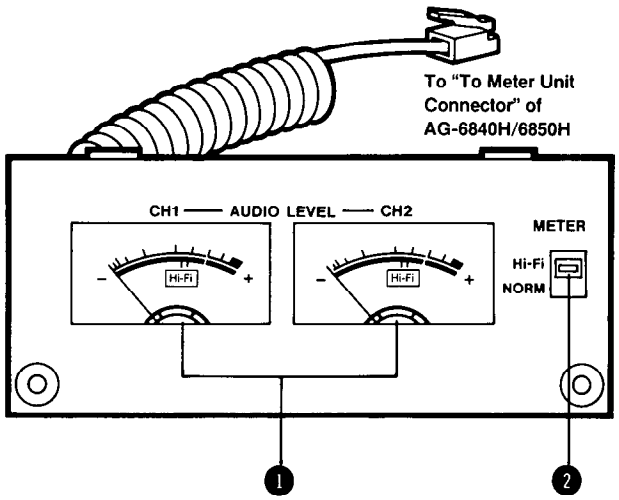
When this Audio Meter is installed onto the AG-6840H/6850H peak meter section, it is use to set and confirm the audio input level. Use the "Audio Input Level Controls" provided on the front panel of the AG-6840H/6850H for adjusting.



■ Audio Meter Unit AG-AM20

This unit is a compact audio meter used to set and confirm the audio input level of AG-6840H/6850H.

It can easily be used only by connecting to the "To Meter Unit Connector" provided on the front panel of the AG-6840H/6850H. Use the "Audio Input Level Controls" for adjusting.



❶ Audio Level Meter

The meter indication can be switched between Normal and Hi-Fi Audio by means of the Meter Selector.

❷ Meter Selector

This selector selects between Normal and Hi-Fi Audio for Audio Level Meter.

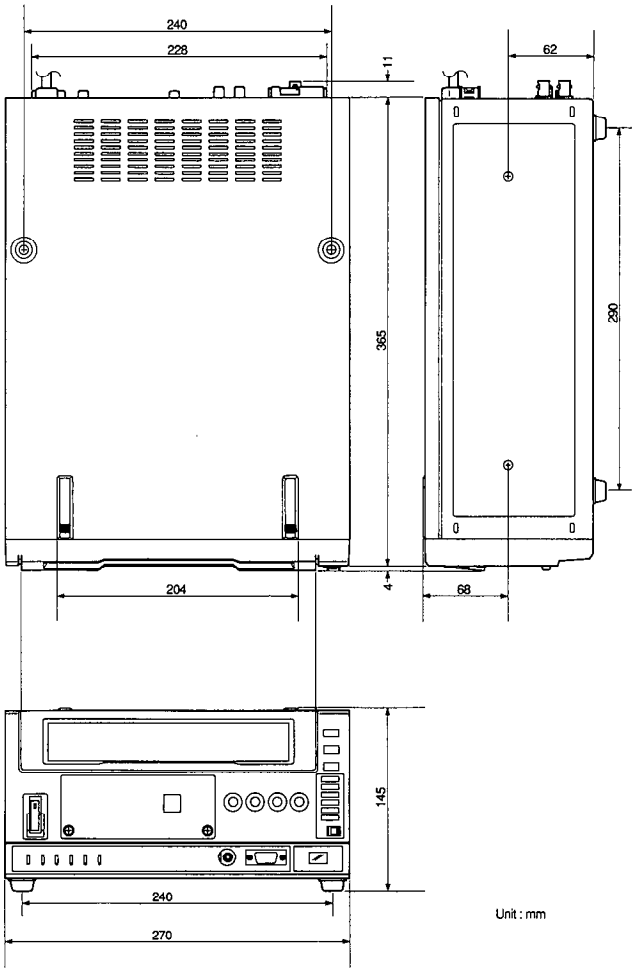
■ Audio Level Adjustment

Adjust the audio input of AG-AM10/AG-AM20 to indicate −8 dB when standard signal (1 kHz, −8 dBv) is input.

Be sure to confirm before using.

> Without this unit, initial setting (audio level) of the VTR cannot be set.
> The audio level of AG-6840H/6850H is set to −8 dB.

DIMENSIONS



Operation

TAPE RUN LAMP

MODE	TAPE RUN LAMP	REMARK
FF; REW	LIGHT	——
REC	FLASH (EVERY 1 SECOND)	
PLAY	FLASH (EVERY 1 SECOND)	Tape Run Lamp is flashed by CTL pulse, so if the tape without CTL pulse is used, Tape Run Lamp doesn't flash.
CUE, REVIEW	FLASH (EVERY 0.2 SECOND)	

REC LAMP

MODE	REC LAMP	REMARK
REC/REC PAUSE	LIGHT	——
REC or REC PAUSE	FLASH (EVERY 1 SECOND)	When REC AUTO OFF SW (SW6512) is set to "ON" side if Video Signal is accidentally stopped during Rec mode, REC LAMP and AUTO OFF LAMP will flash at the same time.

STAND–BY JACK

You can confirm the movement of Mechanism by using the Open Collector output. When a low signal is output from STAND–BY JACK, external lamp will light.
Output Corresponding with VTR mode as shown below.

OUTPUT	VTR MODE
OPEN COLLECTOR	REC/REC PAUSE STOP/EJECT
LOW	PLAY/STILL/CUE REVIEW/FF/REW

AUTO OFF JACK

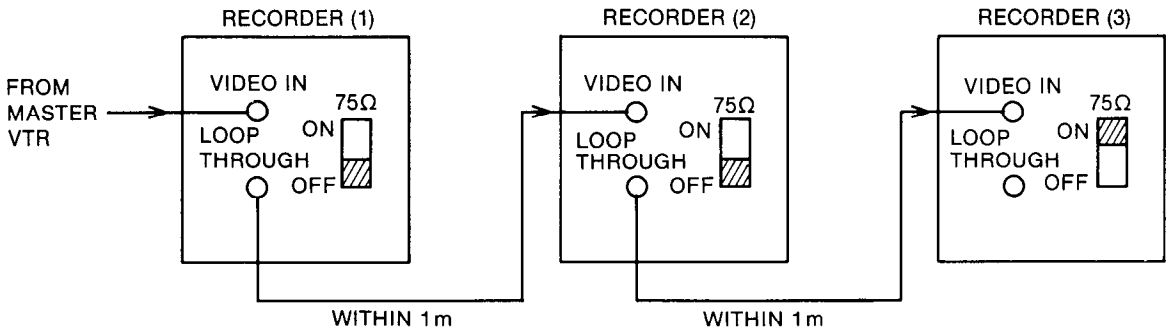
Output corresponding with VTR mode as shown below.

OUTPUT	VTR MODE
LOW	AUTO OFF MODE
OPEN COLLECTOR	OTHER MODE

CHANGER CONNECTOR

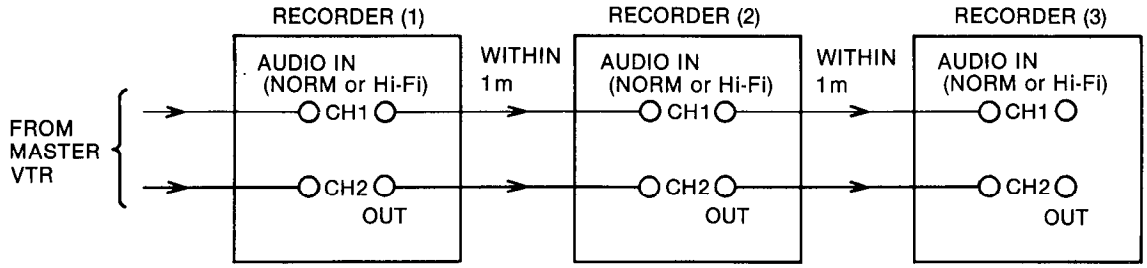
Pin. No.	CONTENTS	REMARK
1	+20V OUTPUT	+20±2V OUTPUT
2	+5V OUTPUT	+5±0.5V OUTPUT
3	GND	——
4	CASSETTE IN OUTPUT	CAS IN Ⓛ/OUT Ⓗ
5	CASSETTE OUT OUTPUT	CAS OUT Ⓛ/IN Ⓗ
6	AUTO OFF OUTPUT	AUTO OFF Ⓛ/OTHER Ⓗ
7	EJECT SW (1)	EJECT Ⓛ
8	TAPE RUN	FF, REW Ⓗ/REC PLAY (PULSE), OTHER Ⓛ
9	START OUTPUT	CHANGER START Ⓛ

VIDEO LOOP THROUGH CONNECTION



Note : (1) The 75 ohm TERMINATE SW of Recorder (FINAL) should be turned on as shown above.
(2) When only one Recorder is used, the 75 ohm TERMINATE SW should be turned on.
(3) You can connect maximum 3 units by Loop–through connector.

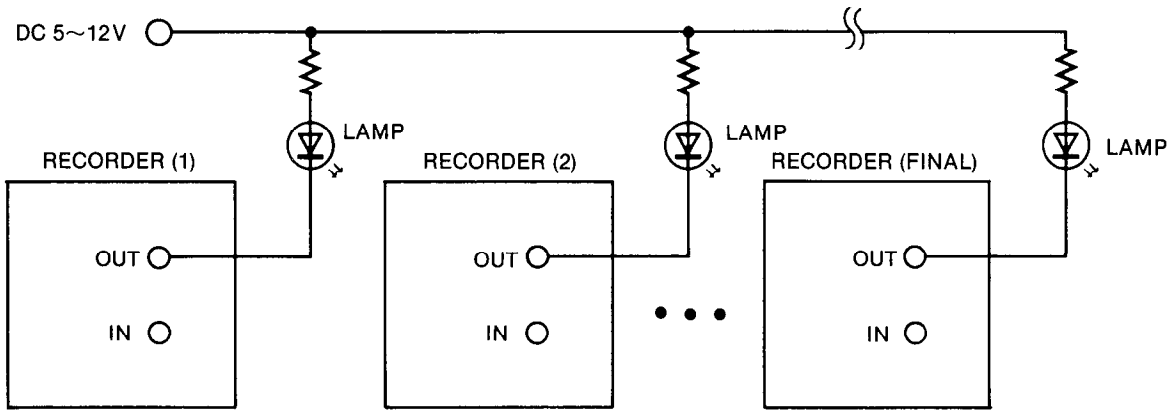
AUDIO LOOP THROUGH CONNECTION



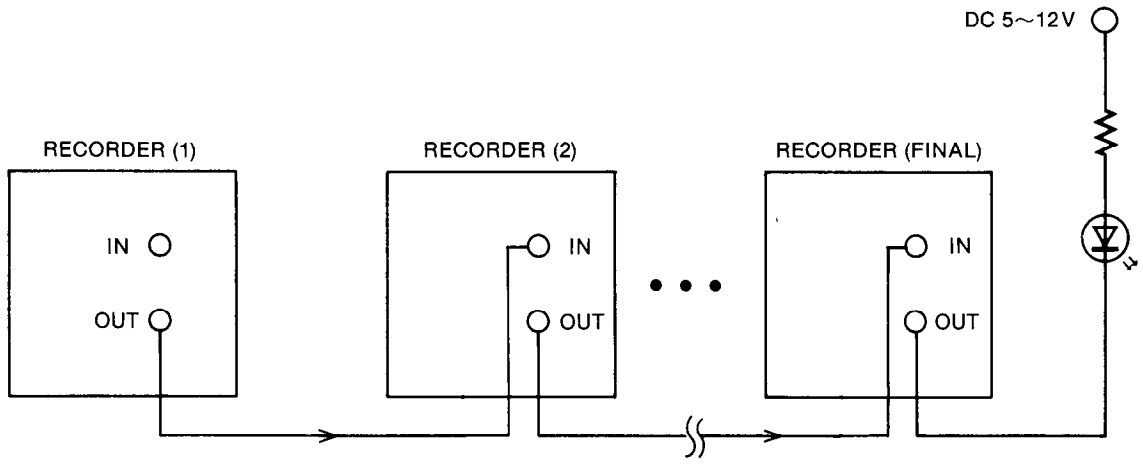
Note : (1) You can connect about 3 units by Loop-through.

AUTO OFF / STAND-BY CONNECTION

[In the case of checking the condition of each Units]



[Other case]



Note:
INPUT JACK and OUTPUT JACK are connected inside the Unit.

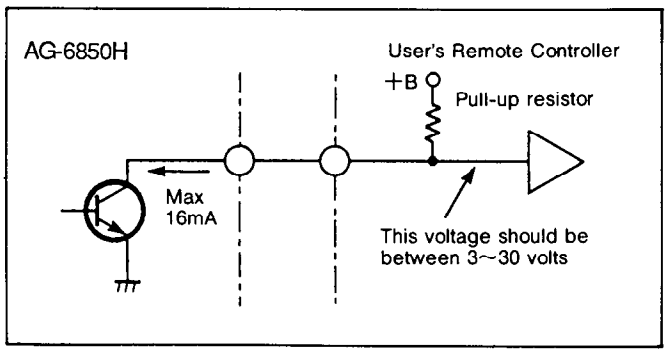
REMOTE CONNECTOR

Pin. No.	Contents	Pin. No.	Contents
[1]	REC SWITCH	(18)	REEL PULSE
[2]	PLAY SWITCH	19	NOT USED
[3]	FF SWITCH	20	NOT USED
[4]	REW SWITCH	[21]	EJECT SWITCH
[5]	STOP SWITCH	22	NOT USED
6	NOT USED	(23)	REC HOLD
[7]	PAUSE SWITCH	(24)	PLAY HOLD
(8)	CASSETTE IN	(25)	FF HOLD
(9)	GND	(26)	REW HOLD
10	NOT USED	(27)	STOP HOLD
11	NOT USED	28	NOT USED
(12)	GND	(29)	PAUSE HOLD
13	NOT USED	30	NOT USED
14	NOT USED	31	NOT USED
15	NOT USED	32	NOT USED
16	NOT USED	33	NOT USED
17	NOT USED	(34)	+12V (Max 100mA)

Note : (1) When the voltage pin 1 is LOW, the unit will go into the REC mode.
(2) ○ : Output pins
□ : Input pins

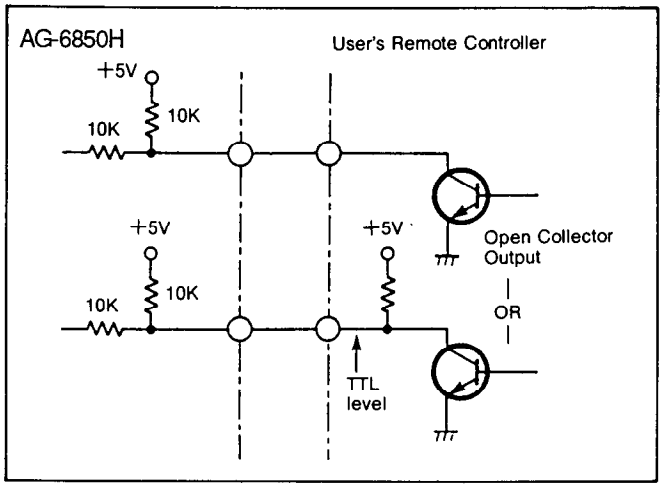
1. Output pins

The signal from the output pins are open collector circuit.
Therefor, user's remote controller circuits for the output pins should be designed as shown below. (except 18th pin)



2. Input pins

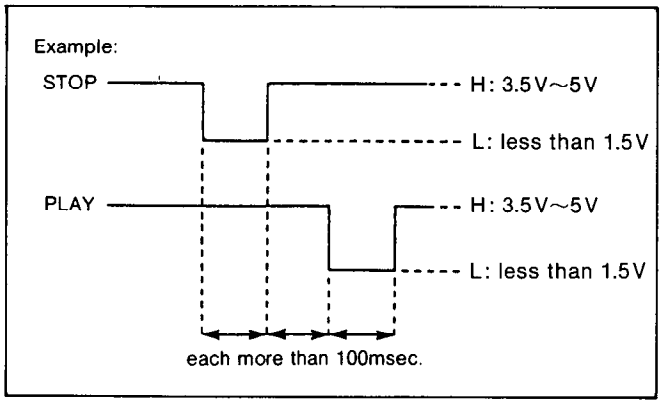
Input pins are internally pulled-up at about +5V. Therefore, user's remote controller circuits for the input pins should be designed open collector output circuit or Transistor Logic (TTL) level (L : Less than 1.5V, H : 3.5V~5V) as shown below.



3. Width of Switching Pulse

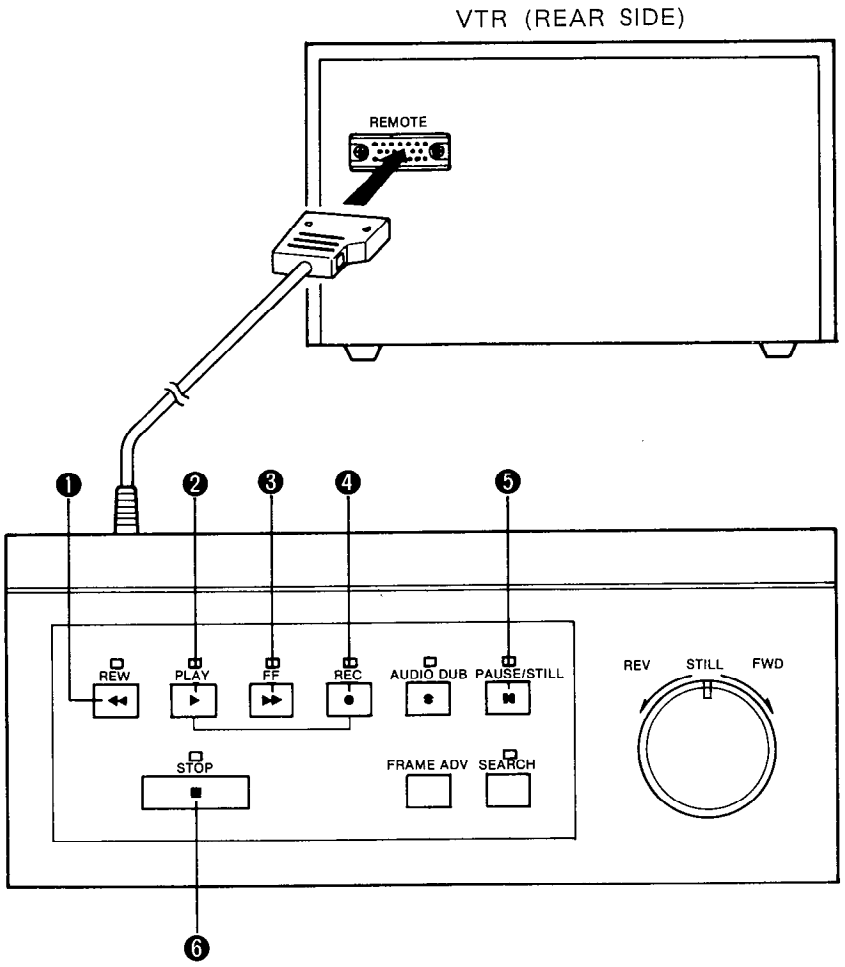
The following specified pulse should be applied to pins of the following table.
Note that pulses should not be overlapped each other.

Contents of signal	Pin No.
REC SWITCH	1
PLAY SWITCH	2
FF SWITCH	3
REW SWITCH	4
STOP SWITCH	5
PAUSE SWITCH	7
EJECT SWITCH	21



REMOTE CONTROLLER AG-A600 (OPTION)

When remote controller AG-A600 is connected to the unit, you can operate as shown below.

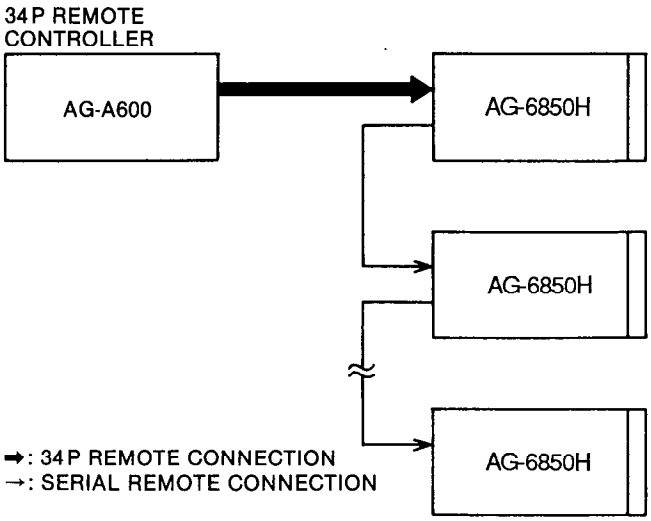


(1) Rewind Button / Lamp
(2) Play Button / Lamp
(3) Fast Forward Button / Lamp
(4) Record Button / Lamp
(5) Pause / Still Button / Lamp
(6) Stop Button / Lamp

Note : AUDIO DUB, FLAME ADV Button, SEARCH Dial (FWD/REV) do not work.

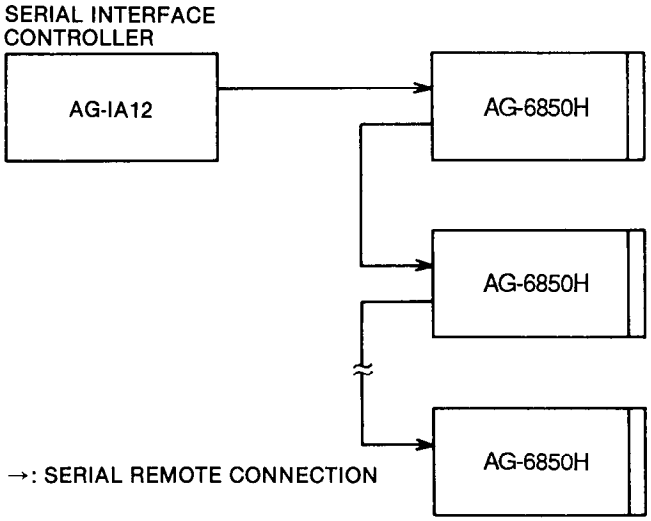
REMOTE CONNECTION

(1) 34P REMOTE CONNECTION



Note : The Internal SW (SW6506) should be set to "SO" side.
The command from 34 pin REMOTE Jack is converted to Serial data in system control microprocessor (IC6001). The serial data is output from SERIAL REMOTE OUT Jack.

(2) SERIAL REMOTE CONNECTION



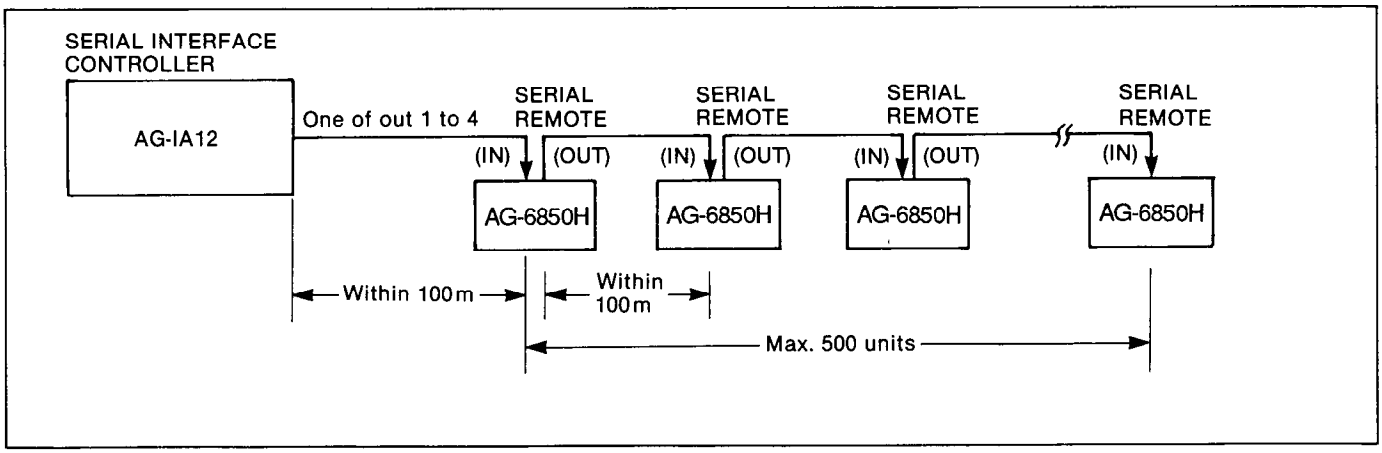
Note : The Internal SW (SW6506) should be set to "THROUGH" or "BUF ON" side.

(3) REMOTE CONTROLLER UNIT (AG-A11) CONNECTION

In the event of above (1) or (2) connection, when a AG-A11 is connected to **AG-6850H**, The unit which is connected AG-A11 is controlled by AG-A11 compulsorily.

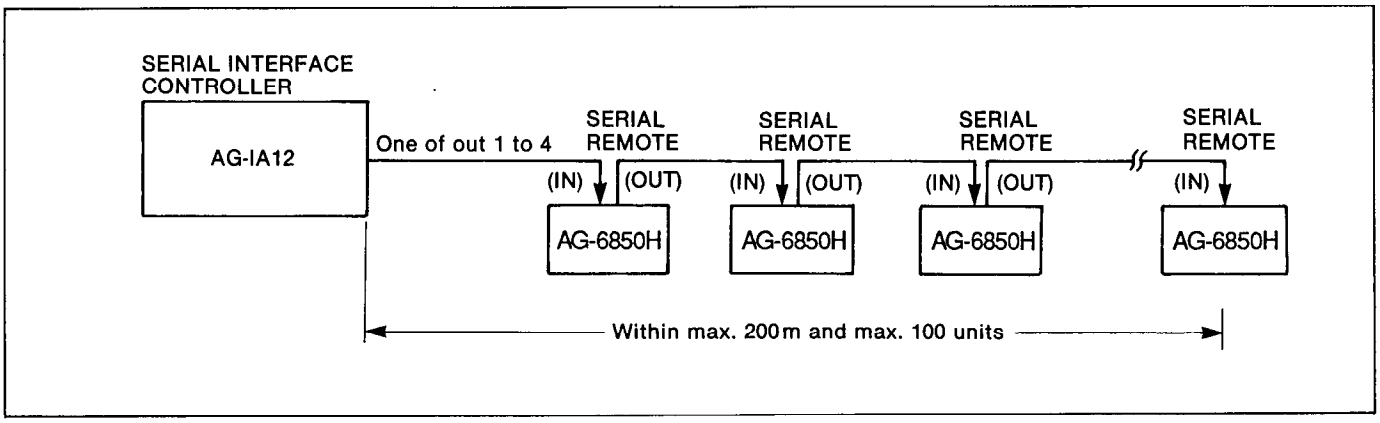
CONNECTION METHOD

Example 1 (direct connection)



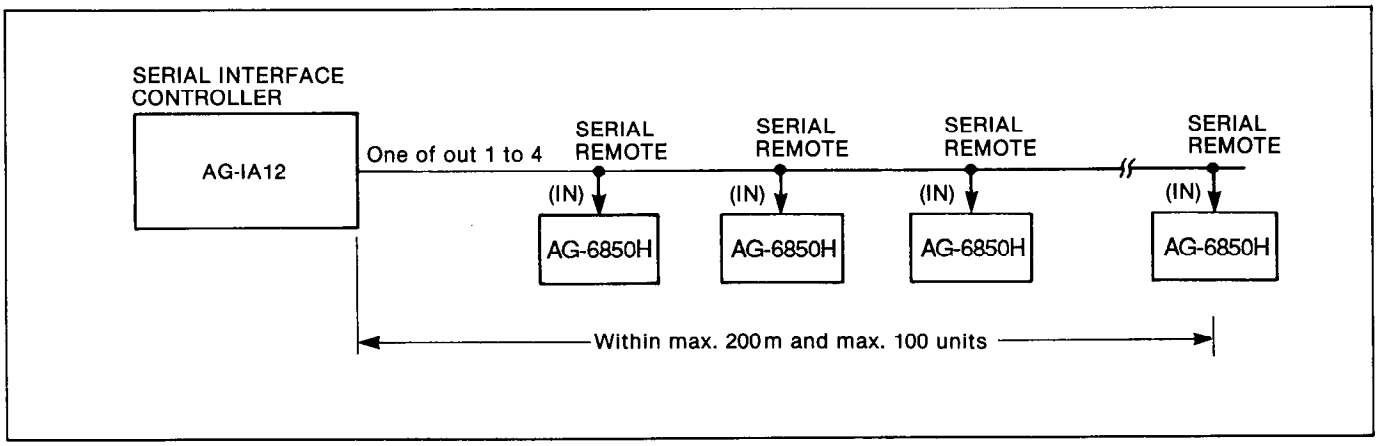
Notes:
* The length of the cable from the transmission part to the VTR should be within 100m. The length also should be kept within 100m from the second unit on. The max. number of units which can be connected is 500 units per output terminal of the transmission part.
* When the internal SW (SW6506) is set to "BUF ON" side, serial code signal output is executed through the VTR with going through the Wave form shaping circuit.
* When the power is OFF for the VTR, the serial code automatically is put out for through, so that there is no interruption. However, waveform shaping will not be executed.
* Use a shield wire for the cable to be connected.

Example 2 (direct connection)



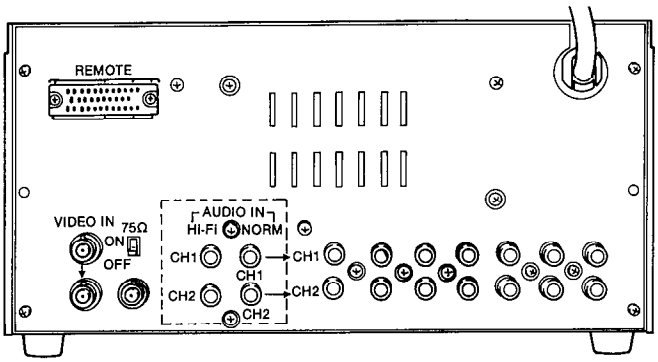
Note:
* When the internal SW (SW6506) is set to "TROUGH" side, serial code signal output is executed through the VTR without going through the waveform shaping circuit. Accordingly, up to 100 units within max. 200m can be connected to one output terminal of the transmission part because of the waveform distortion.

Example 3 (direct connection)

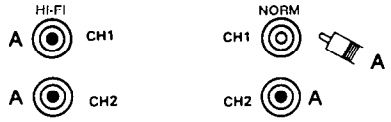


Notes:
* When the internal SW (SW6506) is set to "TROUGH" side, serial code signal output is executed through the VTR without going through the waveform shaping circuit, up to 100 units within max. 200m can be connected to one output terminal of the transmission part.
* With this type of connection, the other VTRs (reception part) will not be influenced when there is trouble for one VTR (reception part).

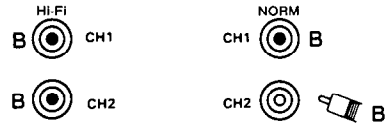
CONNECTING TO THE AUDIO INPUT JACKS



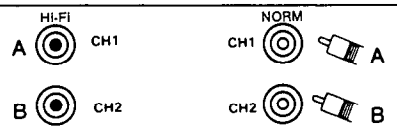
Depending on how the connections are made to the Normal audio input jacks and the Hi-Fi Audio input jacks, the audio operation will change as shown below, so please keep this is mind in making these connections.



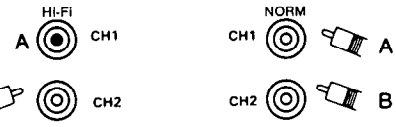
* Audio input A automatically inputs to the jacks with the solid circles in the middle.



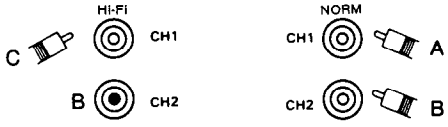
* Audio input B automatically inputs to the jack with a solid circle in the middle.



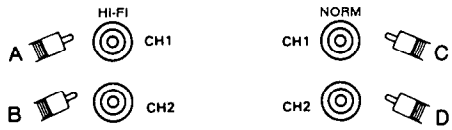
* A and B automatically input to the jacks with solid circles in the middle, as shown in the diagram.



* Audio input A automatically inputs to the jack with a solid circle in the middle.



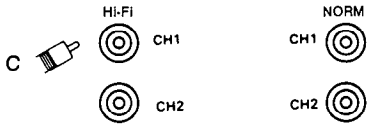
* Audio input B automatically inputs to the jacks with solid circles in the middle.

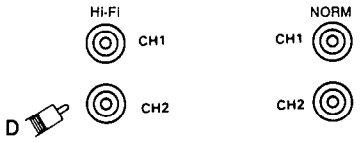


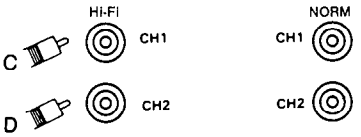
* Audio inputs A,B,C and D are direct inputs to the jacks as shown in the diagram.

<Caution>

As shown in the diagrams below, audio inputs connected to the Hi–Fi Audio input jacks are input only to those jacks.
There is no automatic connection to normal audio.

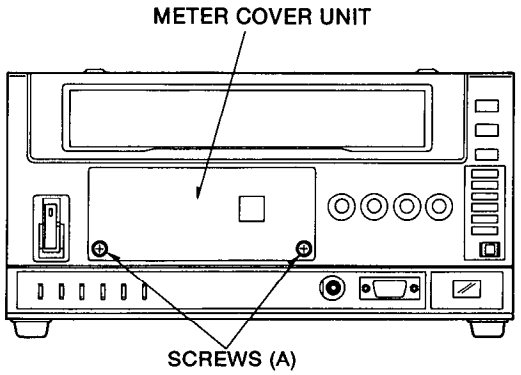






INSTALLING TO AUDIO METER (AG–AM10)

(1) Turn the POWER SW off.
Unscrew 2 screws (A). Remove Meter Cover Unit.



(2) Disconnect a connector (P4802) on the Meter Cover Unit.
Connect above connector to P4801 on the AG–AM10.
Assemble the Meter Cover Unit by using 2 screws (A).

CIRCUIT DESCRIPTIONS

INTERNAL SWITCH AND INDICATOR

The AG-6850H provide some special functions for dubbing purpose.
The unit can select the following 10 functions by selecting the internal mode select switch on the mode select C.B.A. as shown in Figure 1.

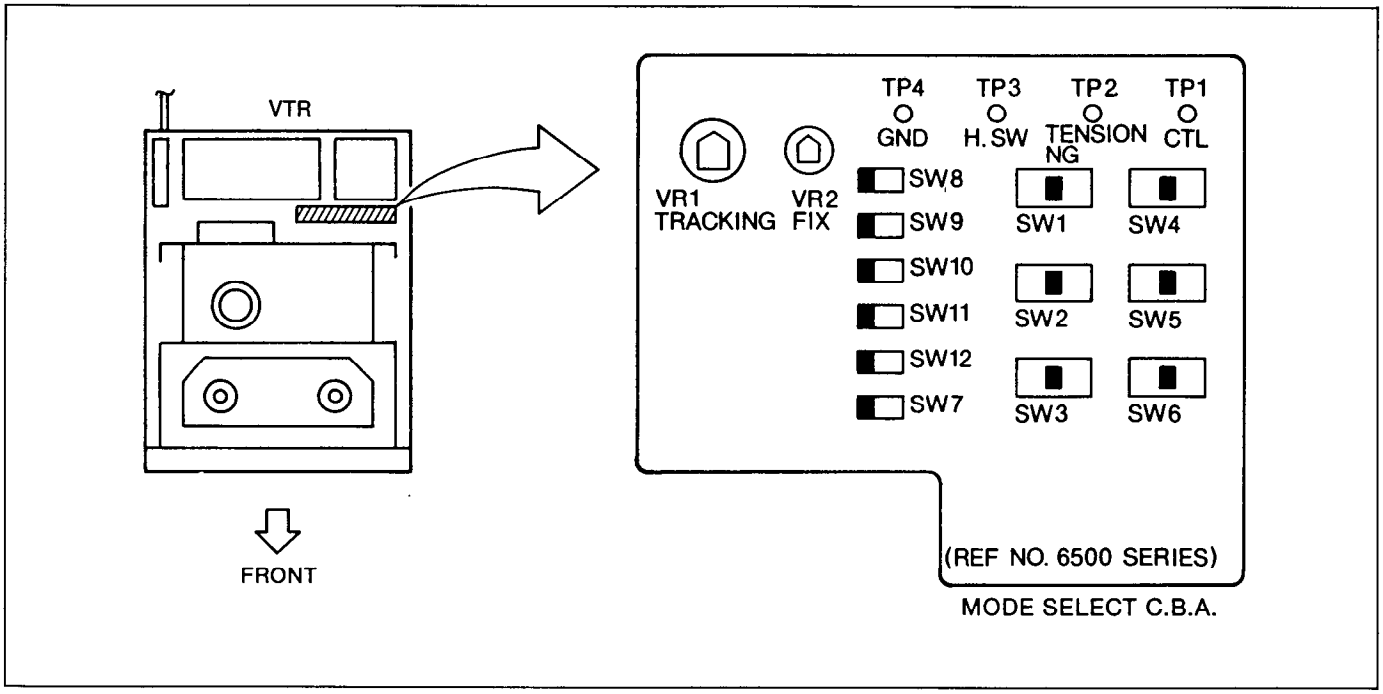


Figure 1

The functions of earch switch are shown in Figure 2 and Figure 3.

REF. NO.	FUNCTION	DESCRIPTION	REMARK
SW6501	AGC	AGC circuit works when this sw is set to "ON".	• When each SW is set to "REM", each circuit is controlled by Serial Interface Controller (AG-IA12). • When each sw is set to "ON", each lamp on the front panel lights.
SW6502	HiFi	HIFI REC circuit works when this sw is set to "ON".	
SW6503	LIMITER	AUDIO LIMITER circuit works when this sw is set to "ON".	
SW6504	DOLBY NR	DOLBY NR circuit works when this sw is set to "ON".	
SW6505	SLP	NO FUNCTION	——
SW6507	S-VHS	NO FUNCTION	——

Figure 2

<table>
<tr><th>REF</th><th>FUNCTION</th><th></th><th>DESCRIPTION</th></tr>
<tr><td rowspan="4">SW6506</td><td rowspan="3">SO/BUF ON/
THROUGH</td><td>"SO" side</td><td>The Unit is controlled by the command of 34 pin Remote Control Connector, then the command is converted to Serial Signal, output from Serial Remote Control Out Jack.</td></tr>
<tr><td>"BUF ON" side</td><td>The Unit is controlled by Serial Signal of Serial Remote Control In Jack, the signal is wave-formed, then the signal is output from Serial Remote Control Out Jack.</td></tr>
<tr><td>"THROUGH" side</td><td>The Unit is controlled by Serial Signal of Serial Remote Control In Jack, the signal is output from Serial Remote Control Out Jack.</td></tr>
<tr><td colspan="3">This SW should be set before Power SW is turned on. The function is shown as below matrix.
<table>
<tr><th>FUNCTION</th><th>"34 pin" side</th><th>"Buf (Through)" side</th></tr>
<tr><td>34 pin CTL</td><td>○ (enable)</td><td>○ (enable)</td></tr>
<tr><td>Serial Remote CTL</td><td>× (unenable)</td><td>○ (enable)</td></tr>
<tr><td>Serial Remote Out</td><td>The command from 34 pin Remote Control Connector is output.</td><td>The command from Serial Remote In Jack is output.</td></tr>
</table></td></tr>
<tr><td>SW6508</td><td>SHORT FF</td><td colspan="2">If this SW is set to "ON", the unit will short fast forward when the tape beginning is detected.</td></tr>
<tr><td>SW6509</td><td>CASSETTE IN
AUTO REWIND</td><td colspan="2">If this SW is set to "ON", the unit will rewind when cassette tape is inserted.</td></tr>
<tr><td>SW6510</td><td>CHANGER START</td><td colspan="2">If this SW is set to "ON", the start signal for the CASSETTE AUTO CHANGER is supplied to the CHANGER when the eject signal is input to the 34 pin REMOTE CONTROL CONNECTOR or SERIAL REMOTE CONTROL CONNECTOR.</td></tr>
<tr><td>SW6511</td><td>REC DIRECT</td><td colspan="2">If this SW is set to "ON", the unit will accept FF, REW, EJECT signal during Rec mode.</td></tr>
<tr><td rowspan="2">SW6512</td><td rowspan="2">REC AUTO OFF</td><td>"ON" side</td><td>• The unit will place in the stop mode when the tape end is detected, and the following lamps perform as follows.
Tape Run Lamp ..... OFF
Record Lamp..... OFF
Eject/Auto Off Lamp..... Flash
(After 30sec. from Tape End)
• The unit will place in the stop mode when the video signal supply is stopped, and the following lamps perform as follows.
Tape Run Lamp ..... OFF
Record Lamp..... Flash
Eject/Auto Off..... Flash</td></tr>
<tr><td>"OFF" side</td><td>• The unit will place in the stop mode when the tape end is detected, and the following lamps perform as follows.
Tape Run Lamp ..... OFF
Record Lamp..... OFF
Eject/Auto Off Lamp..... OFF
• The following lamps perform as follows when the video signal supply is stopped, but the unit will keep in the recording mode.
Tape Run Lamp ..... Flash
Record Lamp..... Flash
Eject/Auto Off Lamp..... OFF</td></tr>
</table>

Figure 3

DISASSEMBLY PROCEDURES

1. DISASSEMBLY FLOW CHART

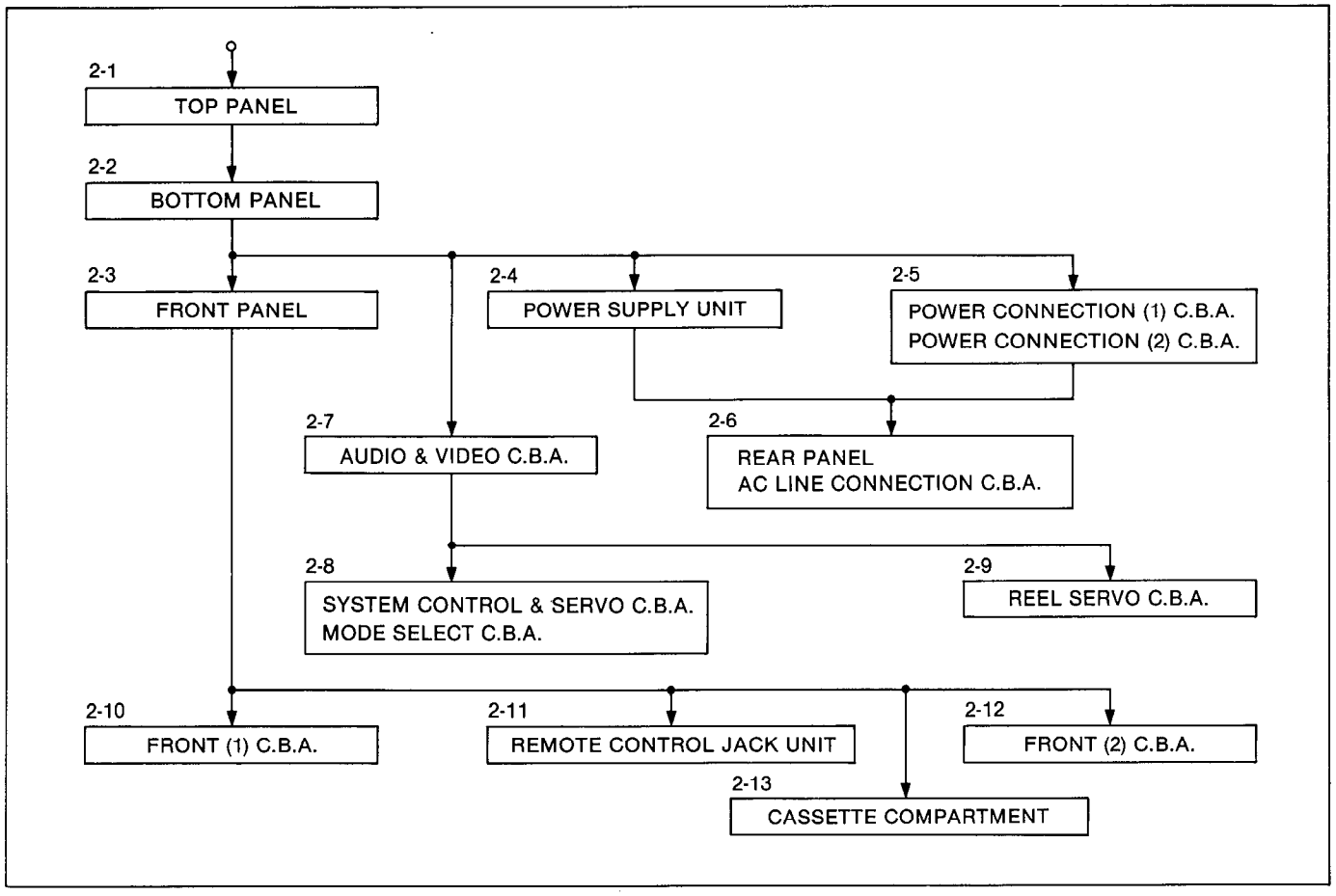


Figure D1

The above flow chart describes the order of steps for removing the cabinet parts and certain printed circuit boards in order to gain access to the items needing servicing. To reassemble the unit, follow the steps in reverse order.

2. DETAILED DISASSEMBLY METHOD

2-1. Removal of the Top Panel

1. Unscrew 2 screws (A) on the Top Panel.
2. Carefully lift the rear of the case and slide it off the back of the unit.

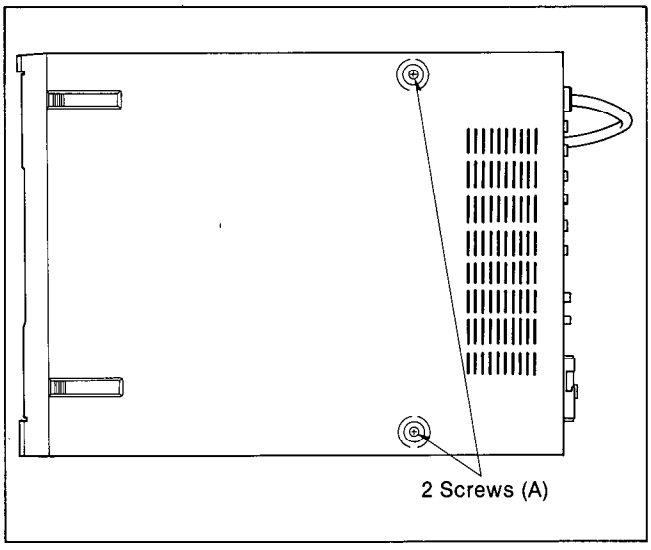


Figure D2

2–2. Removal of the Bottom Plate

1. Unscrew 8 screws (B) and lift off the Bottom Plate.

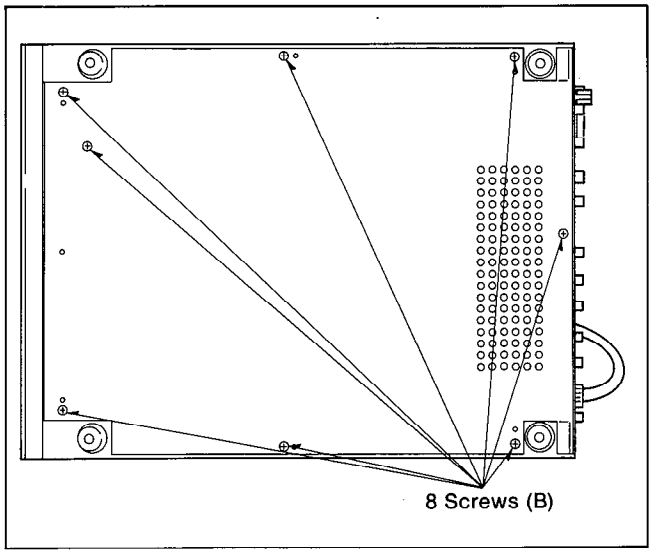


Figure D3

2–3. Removal of the Front Panel

1. Unscrew 2 screws (C) and open the Meter Cover.
2. Disconnect a connector P4802 on the Modular Jack C.B.A.
3. Unscrew 2 screws (D) and unlock 4 locking portions (E).
4. Turn the Front Panel toward the front of the deck to remove.

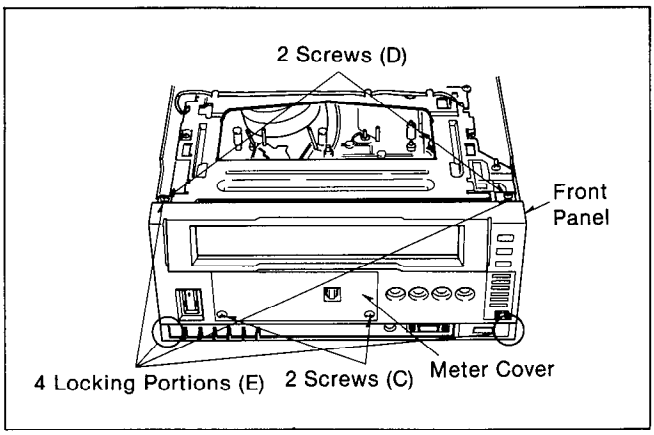


Figure D4

2–4. Removal of the Power Supply Unit

1. Unscrew 3 screws (F) and lift up the unit.
2. Then disconnect 2 connectors and Power Connector between Power Supply unit and AC Line Connection C.B.A. P1001 on the SW Power (1) C.B.A.
3. Pull out the Power Supply Unit.

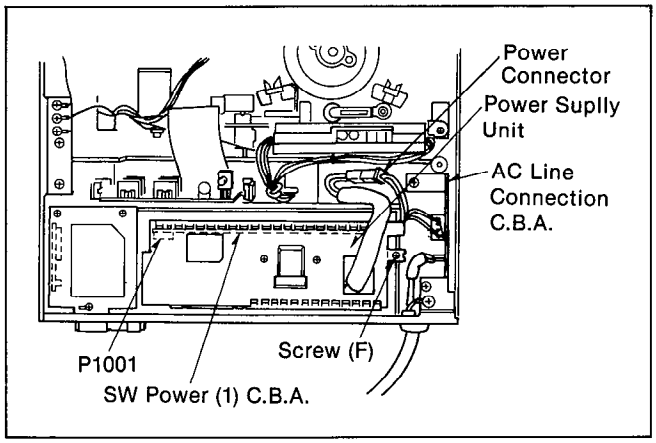


Figure D5

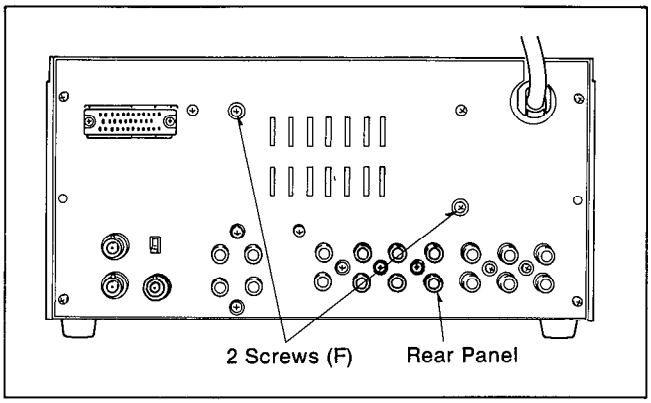


Figure D6

2–5. Removal of the Power Connection (1) C.B.A. and Power Connection (2) C.B.A.

1. Unscrew 3 screws (G) and disconnect 2 connectors P1201 and P1202 on the Power Connection (1) C.B.A.
2. Pull out the Power Connection (1) C.B.A. and Power Connection (2) C.B.A.

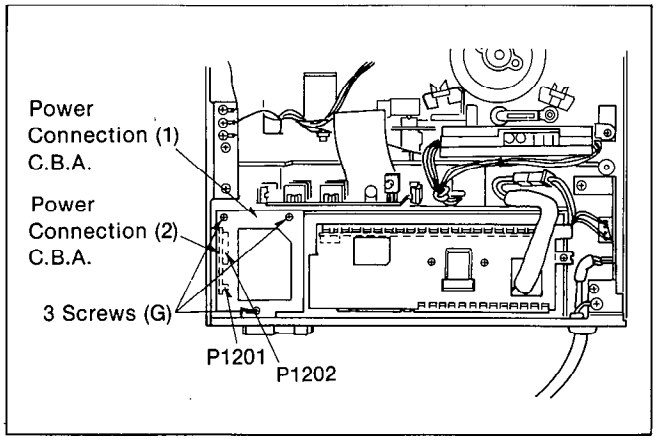


Figure D7

2–6. Removal of Rear Panel and AC Line Connection C.B.A.

1. Unscrew 3 screws (H).
2. Unscrew 2 screws (J) on the bottom side and unscrew 4 screws (K) on the rear side.

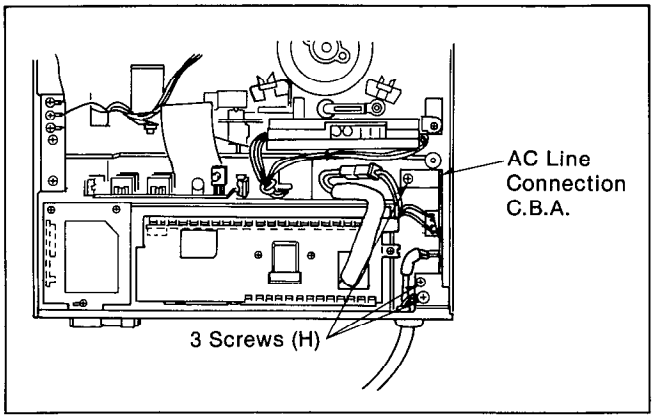


Figure D8

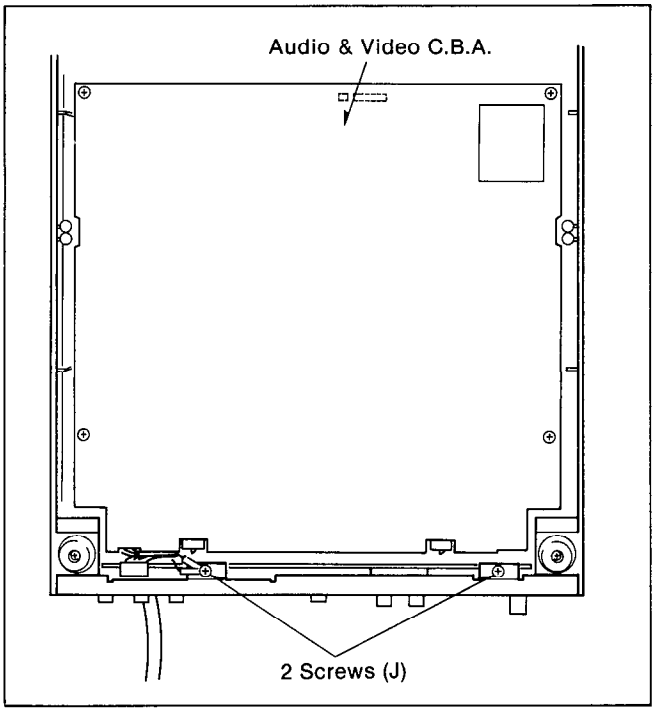


Figure D9

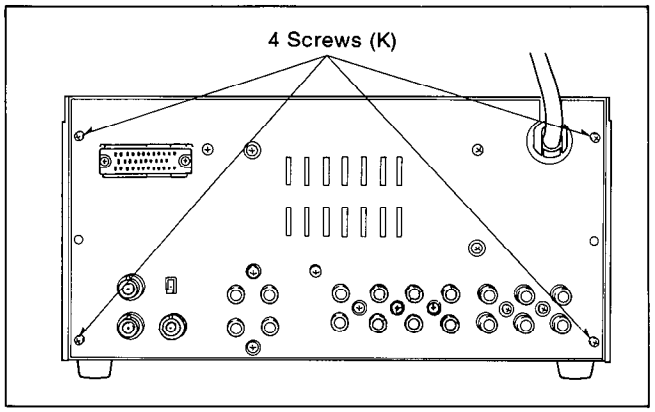


Figure D10

2–7. Opening of the Audio & Video C.B.A.

1. Unscrew 4 screws (L) and disconnect 2 connectors P4302 and P4304 on the Audio & Video C.B.A.

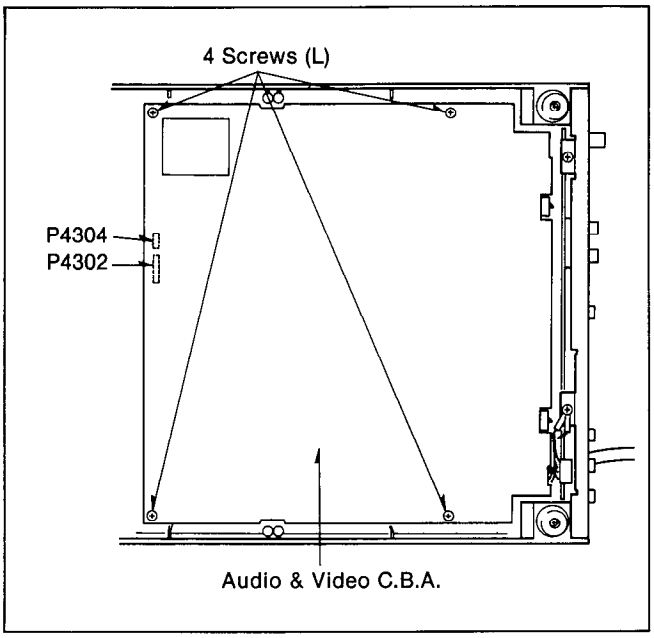


Figure D11

2–8. Opening of the System Control & Servo C.B.A. and Mode Select C.B.A.

1. Unscrew 6 screws (M) and remove 2 rivets (N).
2. Remove the shield plate and disconnect a connector P6013 on the System Control & Servo C.B.A.
3. Unlock 2 locking portions (O) and pull up the Mode Select C.B.A. to top side.

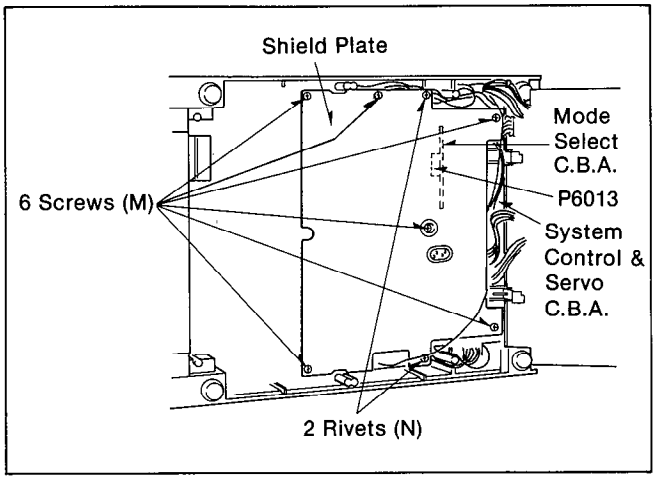


Figure D12

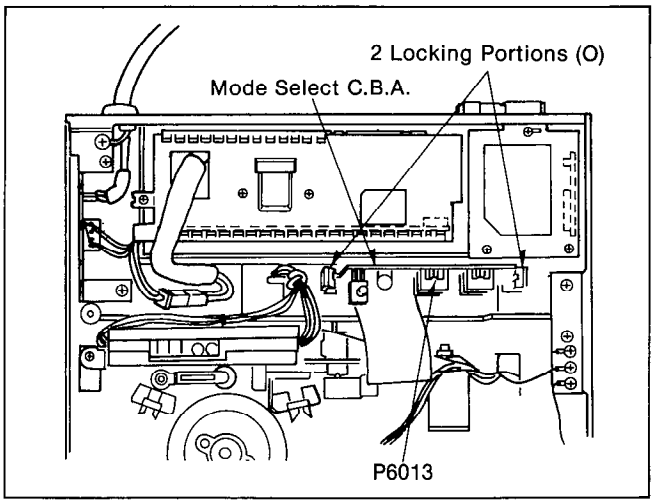


Figure D13

2–9. Removal of the Reel Servo C.B.A.

1. Unscrew 4 screws (P) and remove the Reel Servo C.B.A.

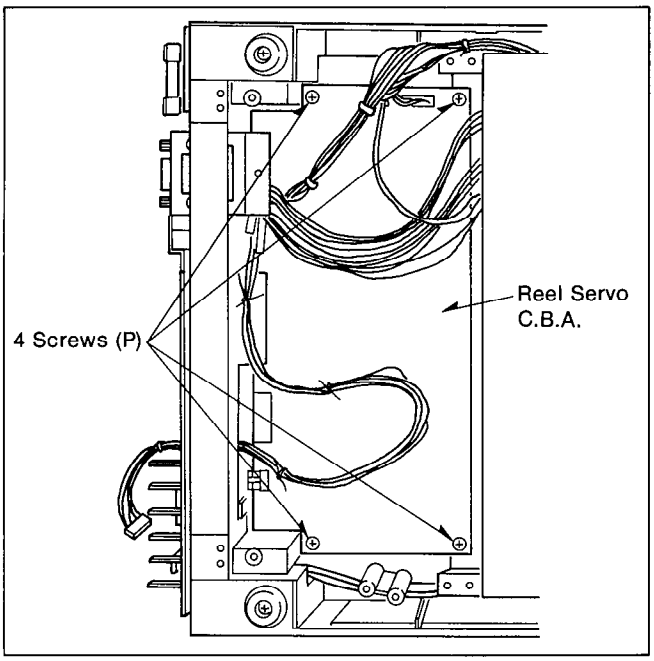


Figure D14

2–10. Removal of the Front (1) C.B.A.

1. Unscrew 3 screws (Q) and remove the Front (1) C.B.A.

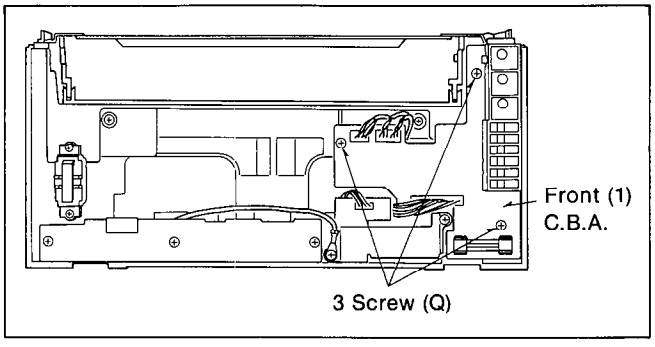


Figure D15

2–11. Removal of the Remote Control Jack Unit

1. Unscrew 2 screws (R) and remove the Remote Control Jack Unit.

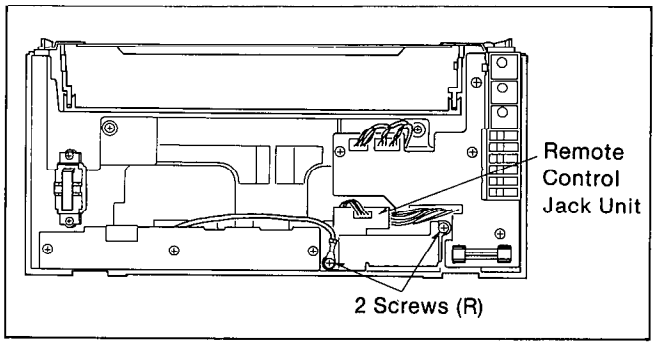


Figure D16

2–12. Removal of the Front (2) C.B.A.

1. Unscrew 3 screws (S) and remove the Front (2) C.B.A.

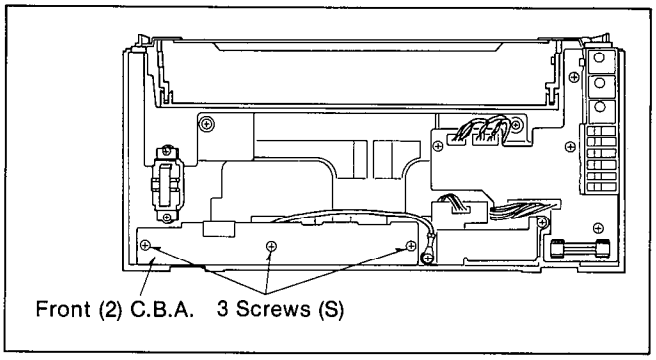


Figure D17

2–13. Removal of the Cassette Compartment

1. Unscrew 4 screws (T) and disconnect 2 wires from P1508 on the right side of the cassette compartment.
2. Remove the top plate.

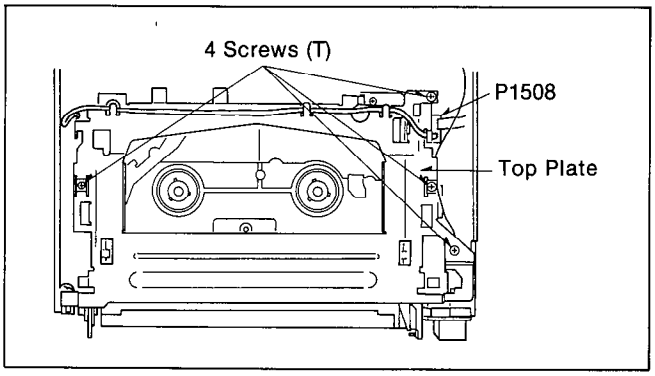


Figure D18

3. Remove a cassette holder unit.

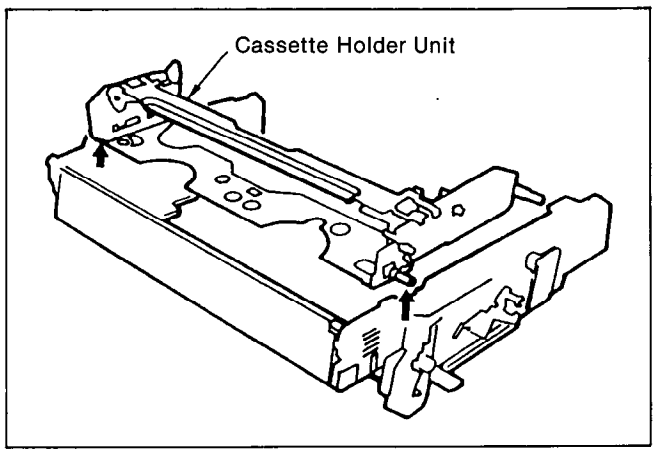


Figure D19

4. Unscrew 4 screws (U) and remove the Cassette Compartment Unit.

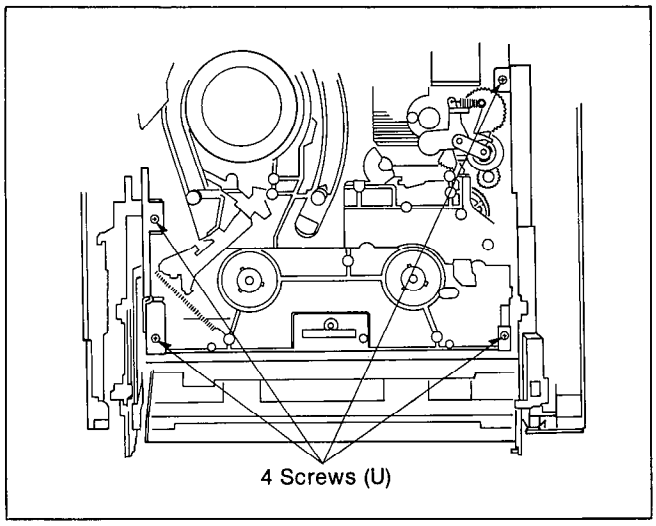


Figure D20

Note:
When installing the Front Loading Unit, refer to Mechanical Adjustment Procedures.

REGULAR MAINTENANCE

1. PARTS LOCATION

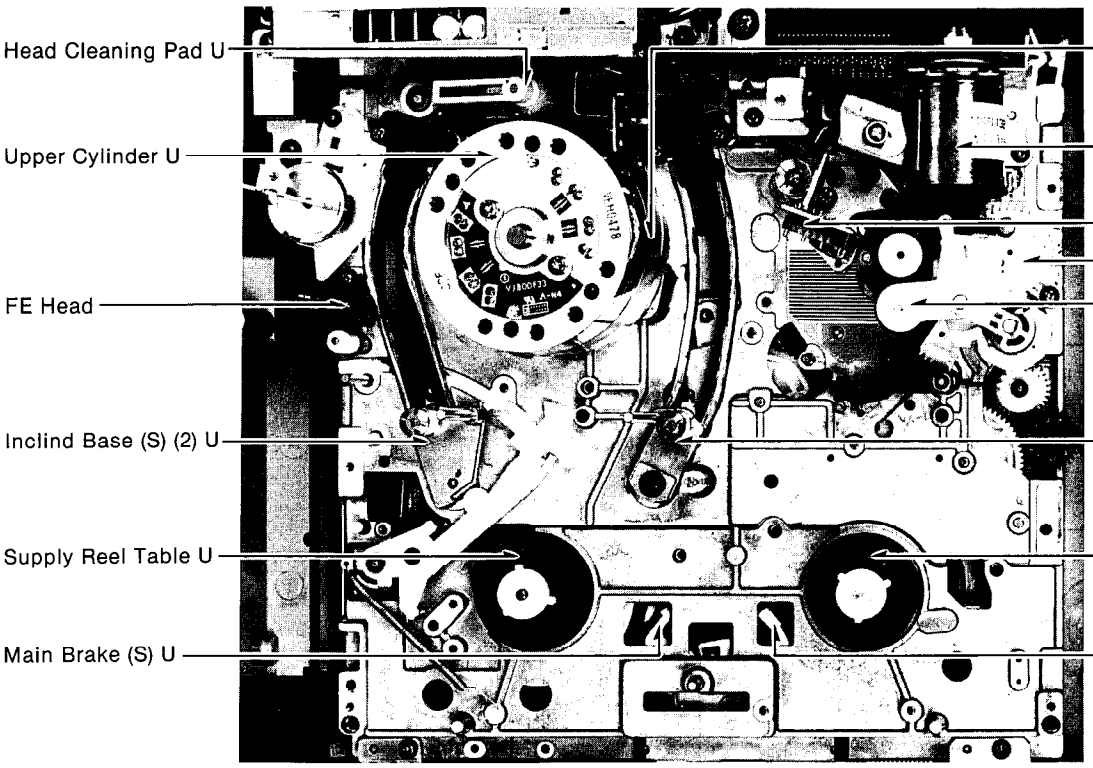


Figure R1 Top View

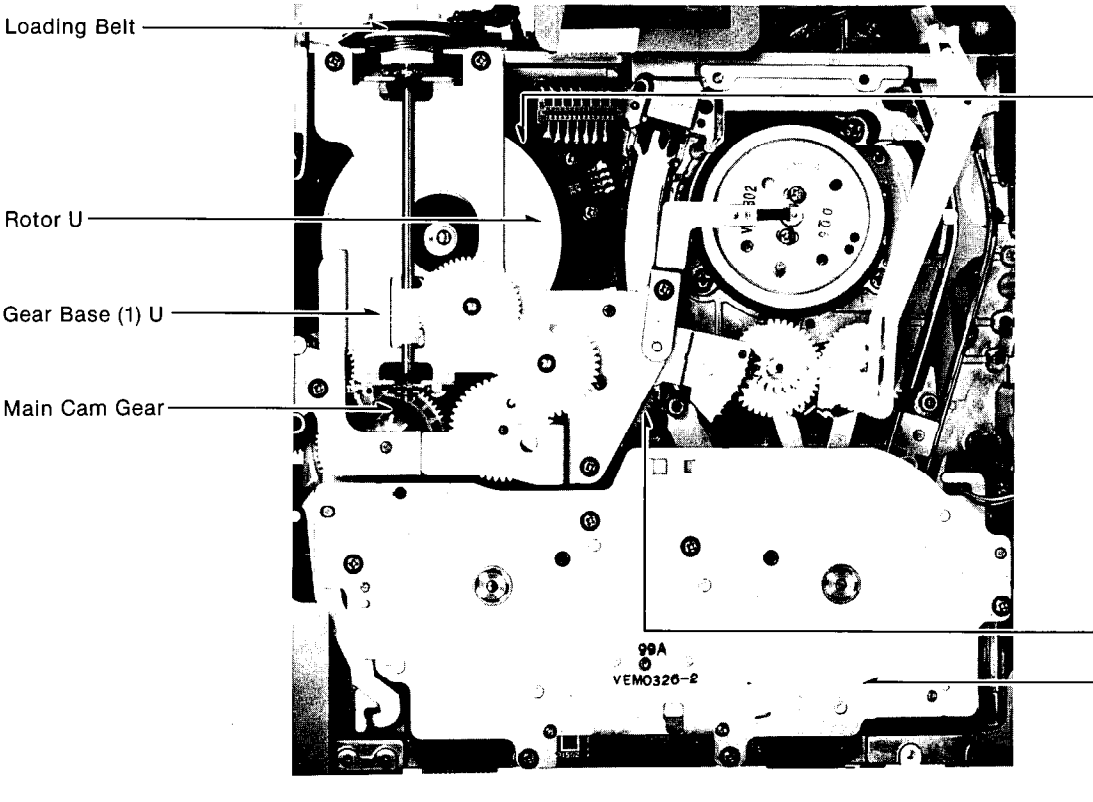


Figure R2 Bottom View

The purpose of periodic maintenance is to preserve the functioning of this machine throughout it's useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated piece of equipment. It contains many belts, rollers, heads etc., which become worn, and deteriorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. long use times, to poor environmental conditions may adversely affect the life-span and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.
Please note that the recommended maintenance schedule depends on temperature and humidity.

2. MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine.

Ref. No. IN P/L	Parts Name	Hour										Ref. No. IN P/L	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000			500	1000	1500	2000	2500	3000	3500	4000	4500	5000
—	Tape Transporters	●	●	●	●	●	●	●	●	●	●	11 (1)	Loading Motor U								◎		
33 (1)	A/C Head U	●	●	●	●	●	●	●	◎	●	●	55 (1)	Inclind Base (S) (2) U								■		
20 (1)	FE Head	●	●	●	●	●	●	●	◎	●	●	61 (1)	Inclind Base (T) (1) U								■		
14 (1)	Upper Cylinder U	●	◎	●	◎	●	◎	●	◎	●	◎	50 (1)	Head Cleaning Pad U		◎		◎		◎		◎		◎
12 (1)	Lower Cylinder U	●	●	●	●	●	●	●	●	●	◎※1	22 (1)	Mode SW								◎		
96 (2)	Capstan Rotor U (Shaft)	●	●	●	●	●	●	●	●	●	●	82 (2)	Reel Motor U								◎		
37 (1)	Pressure Roller U	●	●	●	◎	●	●	●	◎	●	●	110 (2)	Loading Cam Gear								■		
93 (2)	Main Brake (S) U				◎				◎			104 (2)	Main Cam Gear								■		
94 (2)	Main Brake (T) U				◎				◎			80 (2)	Worm Shaft								■		
81 (2)	Loading Belt				◎				◎			83 (2)	Worm Wheel								■		
E44	HOUR METER										◎												

※1: Regarding AG-6850H the replacement period will be longer than 5000 Hour.

＊NOTE:

Symbol	Maintenance	Requirement	Remark
●	Cleaning	Freon TF, Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with or Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
◎	Replacement	———	———
■	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.

3. MAINTENANCE PROCEDURES

3-1. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

1. Take out the Main AC.
2. Release the direction as shown in Figure R3.
3. Rotate the Wormshaft to clockwise until cassette is ejected.

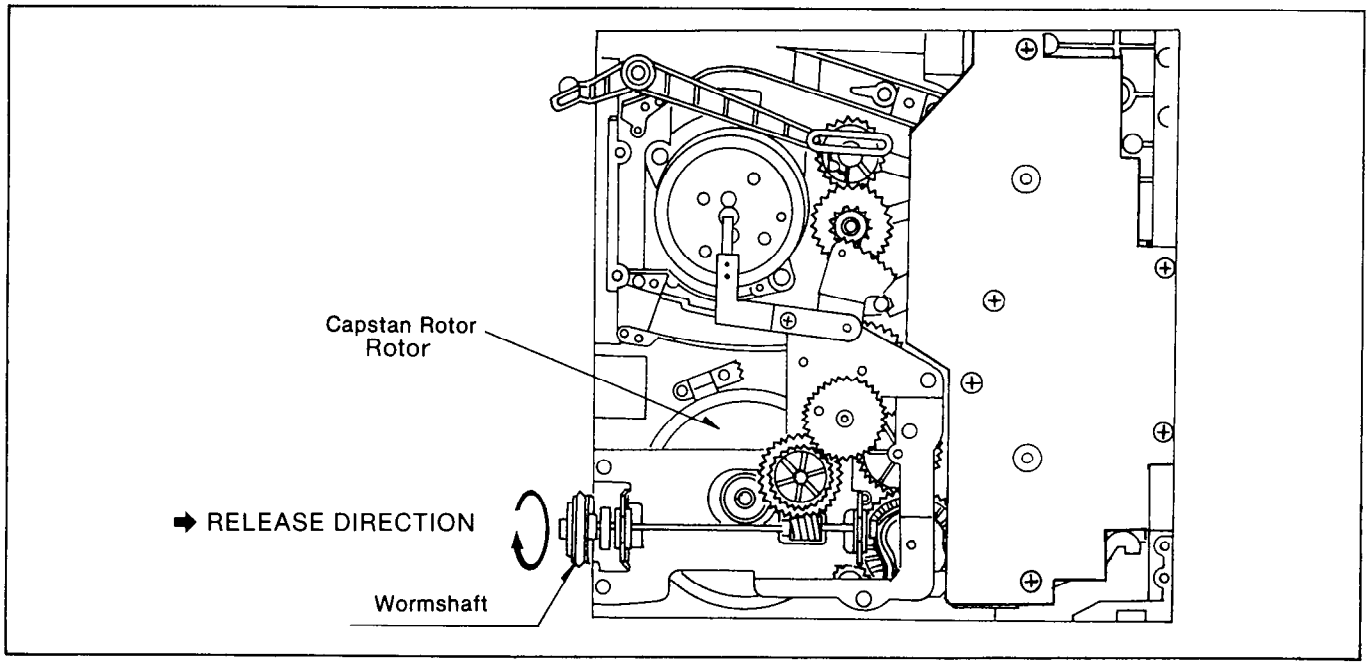


Figure R3

3-2. CYLINDER MAINTENANCE PROCEDURES

A. Procedures for Cleaning of the Cylinder Unit

1. Position the video head to permit access for cleaning and hold the upper cylinder to keep it from turning while cleaning.
2. Gently rub the video head in direction of tape travel with Head Cleaning Stick moistened with Cleaning Liquid.
3. Repeat for the other video heads. (Figure R4)

*Notes:
1. Do not rub vertically.
2. Do not apply any pressure to heads.

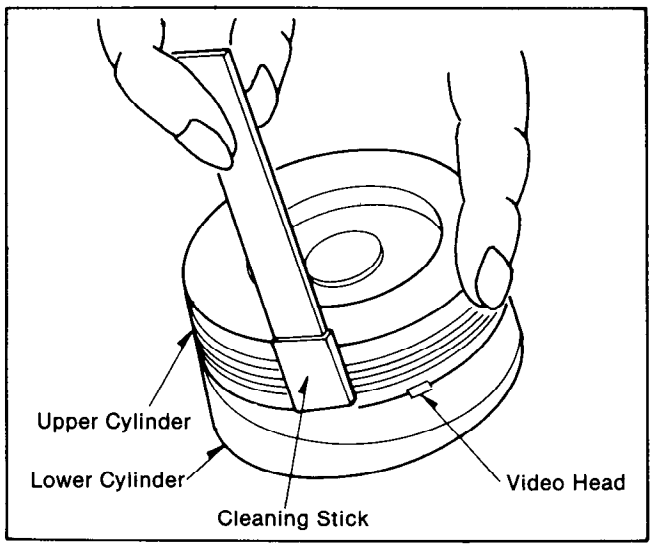


Figure R4

B. Replacement of the Upper Cylinder Unit

1. First remove two screws as shown in Figure R5. Then unsolder 8 (Figure R6) of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

*Note: Soldered portion can be easily removed by using solder sucking wire, etc.

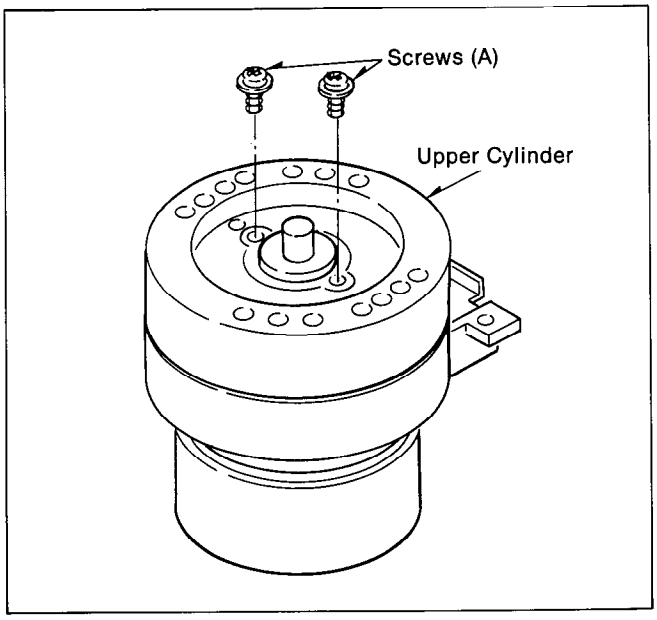


Figure R5

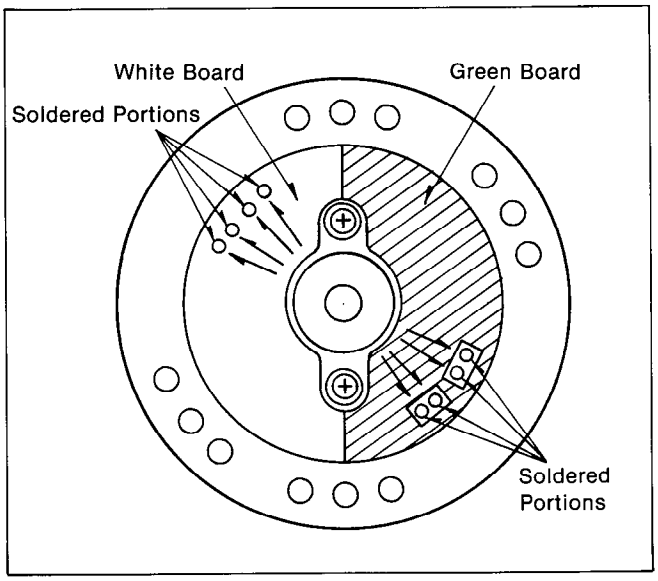


Figure R6

2. The Upper Cylinder unit can be reinstalled by reversing the removal procedure.
However, when Upper Cylinder is installed, be extremely carefully so that white portion of P.C. board of Upper Cylinder correctly matches the white portion of bottom cylinder.

C. Replacement of the Lower Cylinder Unit

1. Unscrew 2 screws (B) and remove the Head Amp C.B.A. and then disconnect the connector. (Figure R7)

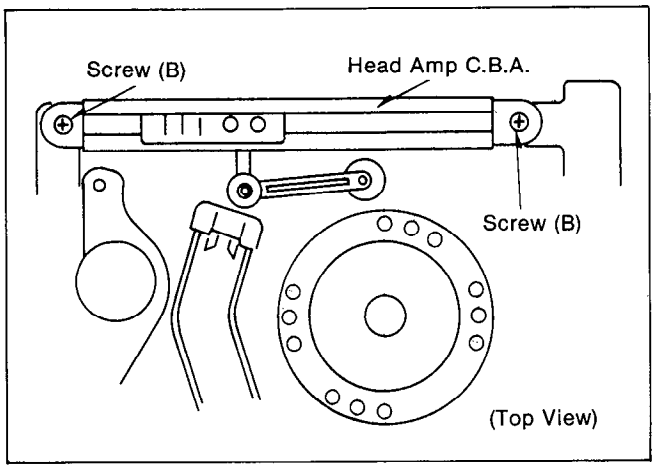


Figure R7

2. Remove the Cleaning Rod from bottom side.
3. Disconnect a connector (D).
4. Unscrew 3 screws (C). Since there is very little clearance between DD Cylinder (Lower Cylinder) Unit and Chassis, remove the Cylinder gently and carefully. (Figure R8).

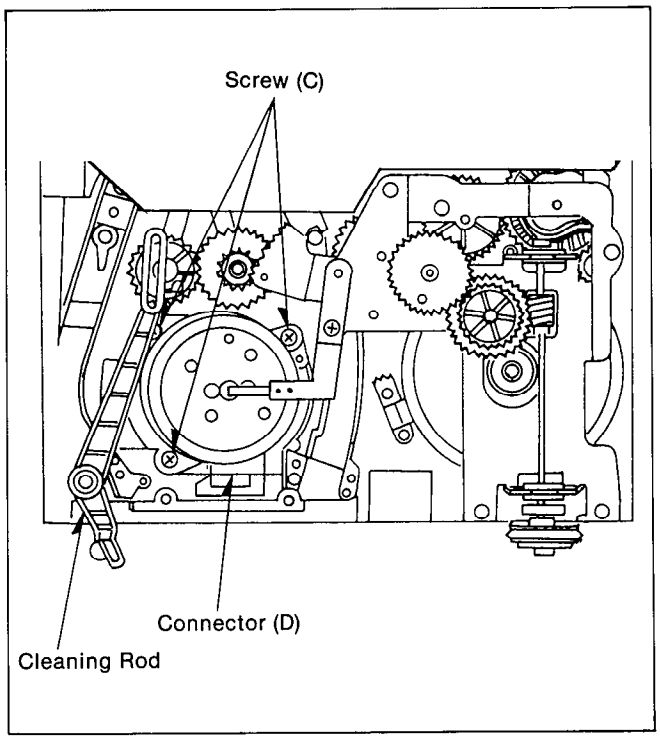


Figure R8

5. Reinstall the new DD Cylinder (Lower Cylinder) Unit in the chassis, tighten the 3 screws (C). Then connect a connectors and reinstall the Cleaning Rod.
6. Re-install the Head Amp C.B.A.

D. Adjustment After Re-Installing

Figure R9 shows the order of steps for adjusting the mechanical and electrical.

These adjustments should be performed after completion of reinstalling the Upper Cylinder or Lower Cylinder Unit.

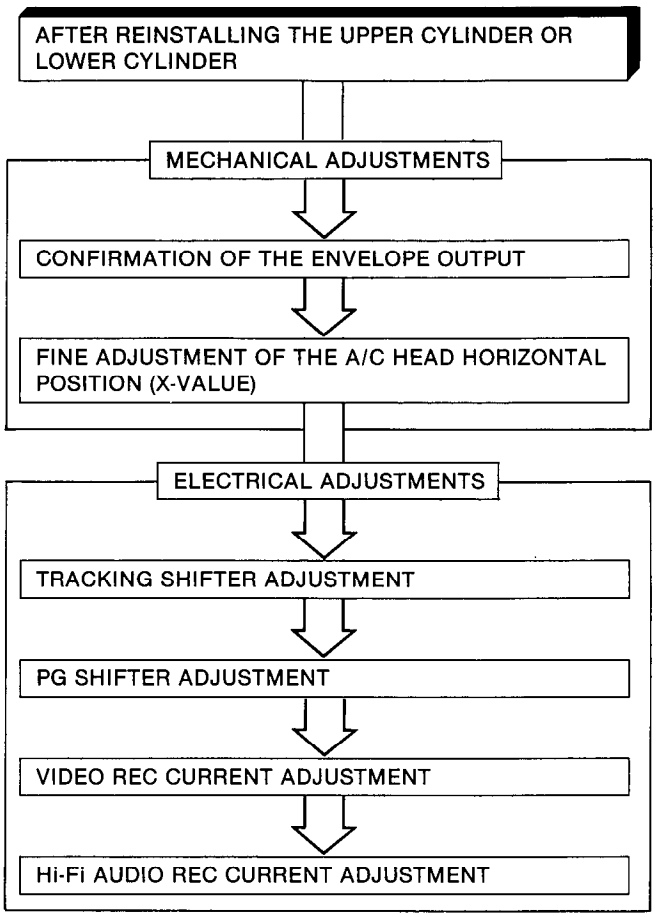

AFTER REINSTALLING THE UPPER CYLINDER OR LOWER CYLINDER
MECHANICAL ADJUSTMENTS
CONFIRMATION OF THE ENVELOPE OUTPUT
FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
ELECTRICAL ADJUSTMENTS
TRACKING SHIFTER ADJUSTMENT
PG SHIFTER ADJUSTMENT
VIDEO REC CURRENT ADJUSTMENT
Hi-Fi AUDIO REC CURRENT ADJUSTMENT

Figure R9

3-3. A/C HEAD MAINTENANCE PROCEDURES

A. Replacement of the A/C Head (1) Unit

1. Disconnect a connector (H). (Figure R10)
2. Unscrew 3 screws (E)(F)(G) with a spring and then remove the A/C Head (1) Unit (FigureR10).

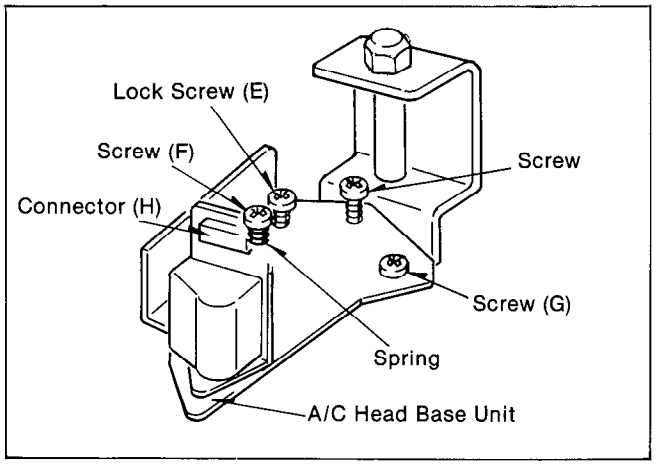


Figure R10

3. The A/C Head (1) Unit can be reinstalled by reversing the removal procedure.

B. Adjustment After Re-installing

Figure R10 shows the order of steps for adjusting the mechanical and electrical.
These adjustments should be performed after completion of reinstalling the A/C Head (1) Unit.

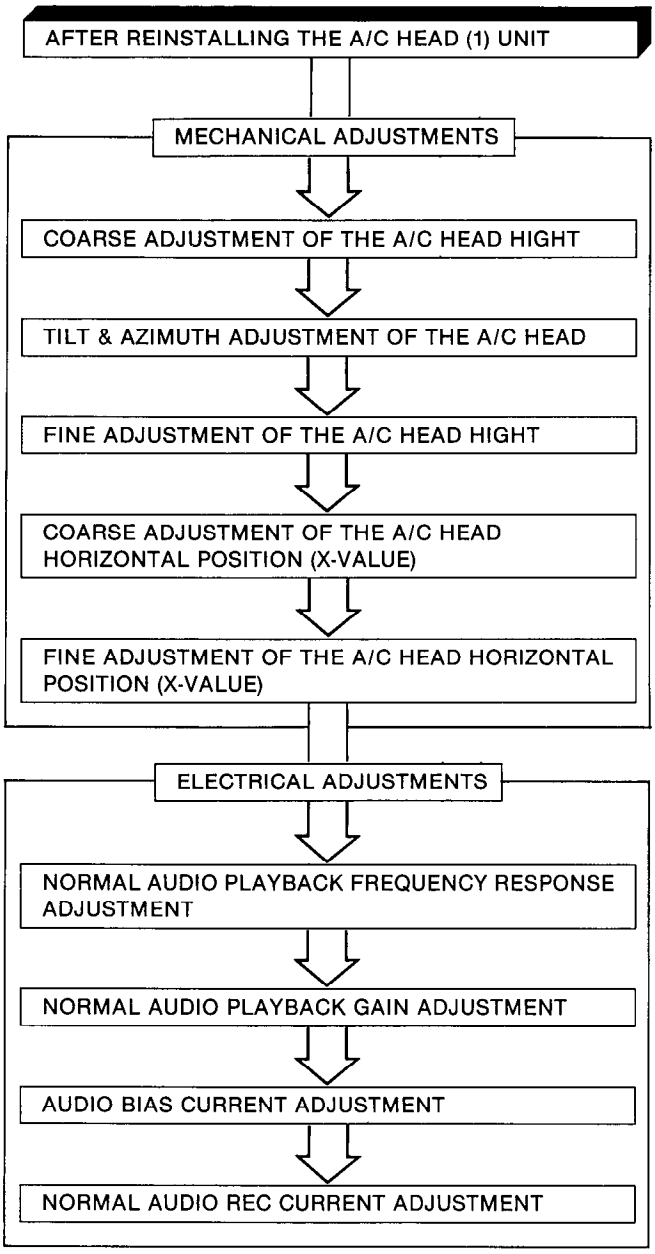

AFTER REINSTALLING THE A/C HEAD (1) UNIT
MECHANICAL ADJUSTMENTS
COARSE ADJUSTMENT OF THE A/C HEAD HIGHT
TILT & AZIMUTH ADJUSTMENT OF THE A/C HEAD
FINE ADJUSTMENT OF THE A/C HEAD HIGHT
COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
ELECTRICAL ADJUSTMENTS
NORMAL AUDIO PLAYBACK FREQUENCY RESPONSE ADJUSTMENT
NORMAL AUDIO PLAYBACK GAIN ADJUSTMENT
AUDIO BIAS CURRENT ADJUSTMENT
NORMAL AUDIO REC CURRENT ADJUSTMENT

Figure R11

3-4. FULL ERASE HEAD MAINTENANCE PROCEDURES

A. Replacement of the Full Erase Head

1. Disconnect a connector (J).
2. Unscrew a screw (K) and remove the Full Erase Head.

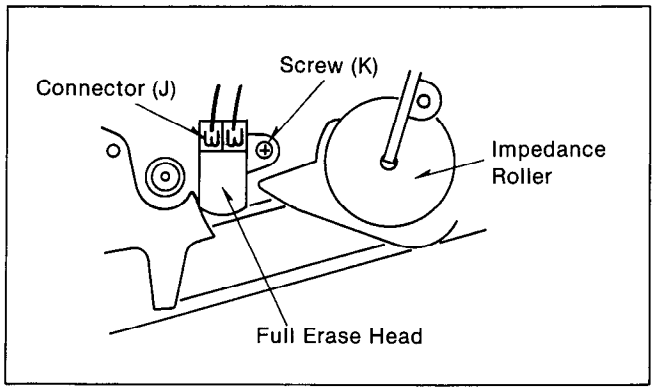


Figure R12

3. The new Full Erase Head can be reinstalled by reversing the removal procedure.

3-5. PRESSURE ROLLER MAINTENANCE PROCEDURES

A. Replacement of the Pressure Roller Unit

1. Place the deck in STOP or EJECT mode.
2. Remove the Pinch Can Cap.
3. Remove the Pressure Roller Unit.

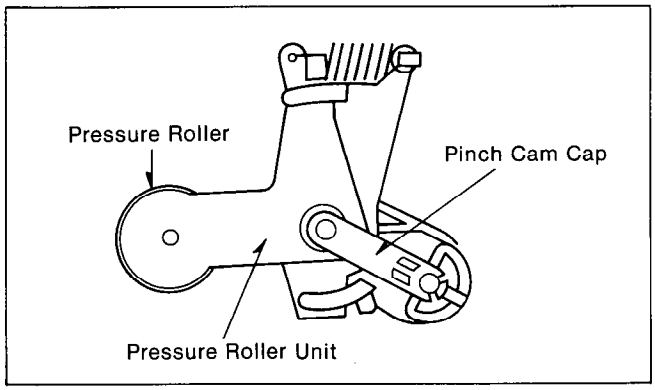


Figure R13

4. The new Pressure Roller Unit can be re-installed by reversing the removal procedure.

3-6. REEL MOTOR UNIT MAINTENANCE PROCEDURES

A. Replacement of the Reel Unit

1. Remove 6 screws (L) and carefully lift the DD Reel Unit.
2. Disconnect a connector.

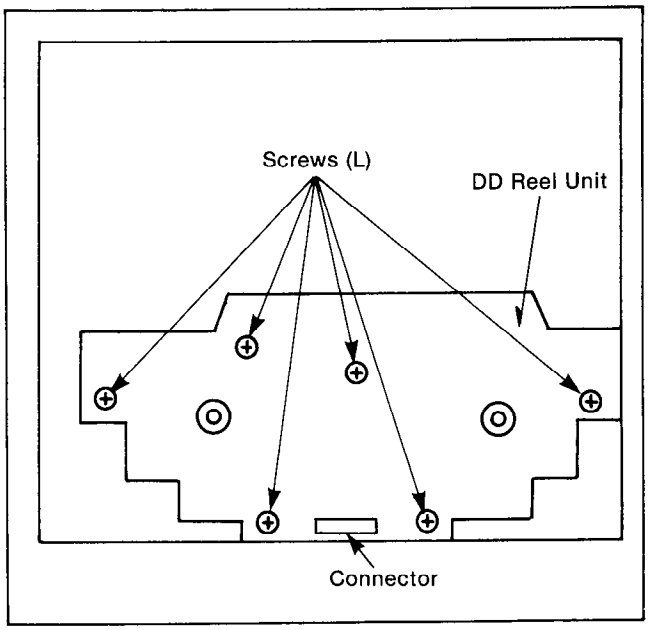


Figure R14

3. The Reel Motor Unit can be re-installed by reversing the removal procedure.

*Note: When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear.

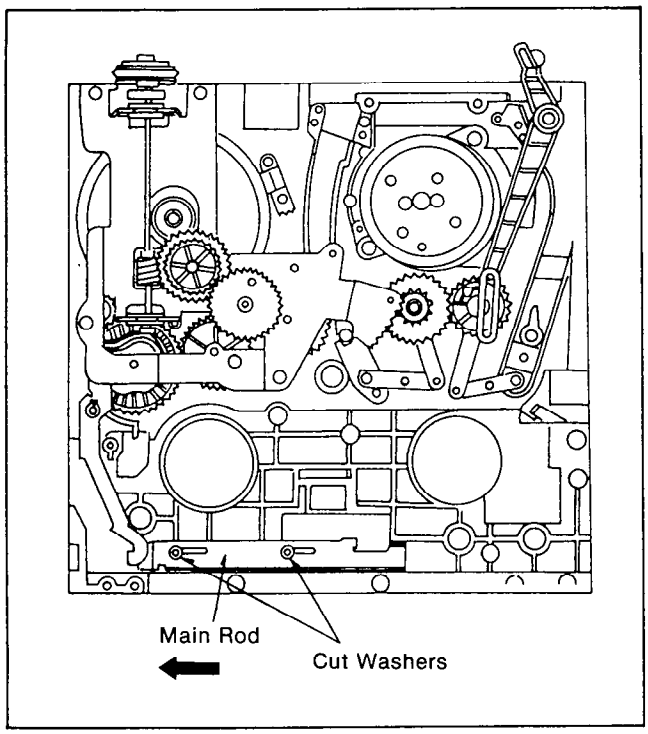


Figure R15

3-7. MAIN BRAKE (S),(T) UNIT MAINTENANCE PROCEDURES

A. Replacement of the Main Brake (S),(T) Unit

1. Remove the Reel Unit. (Refer to Reel Motor Maintenance Procedures.)
2. Remove a Retaining Ring.
3. Remove the Main Brake (S),(T) with a spring.

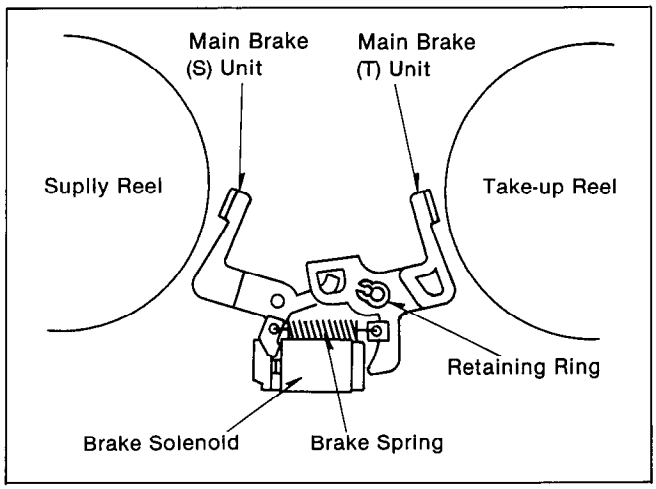


Figure R16

4. The new Main Brake (S),(T) Unit can be reinstalled by reversing the removal procedure.

*Note: When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear. (Figure R16)

3-8. LOADING MOTOR UNIT MAINTENANCE PROCEDURES

A. Replacement of the Loading Motor Unit

1. Remove the Loading Belt.
2. Remove the Loading Motor Pulley.
3. Disconnect a connector.
4. Unscrew 2 screws (M) and remove the Loading Motor Unit.

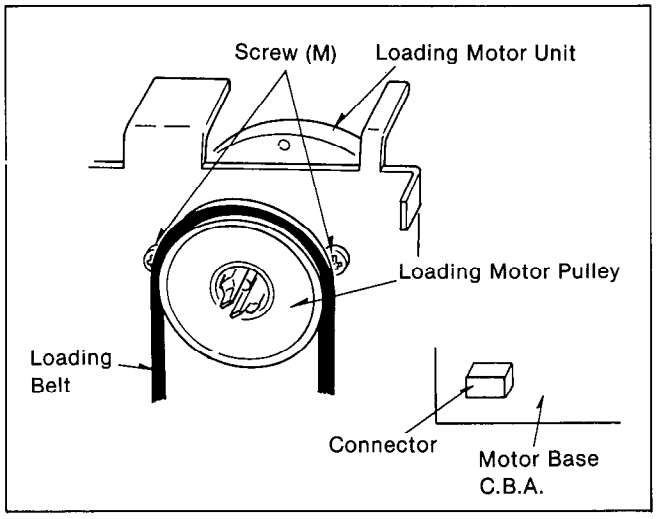


Figure R17

5. The Loading Motor Unit can be reinstalled by reversing the removal procedure.

3-9. HEAD CLEANINGPADUNIT MAINTENANCE PROCEDURES

A. Replacement of the Head Cleaning Pad

1. Remove screw (N) and the Head Cleaning Unit.
2. Remove a Cut Washer (O) and the Head Cleaning Pad Unit.
3. The Head Cleaning Pad Unit can be reinstalled by reversing the removal procedure.

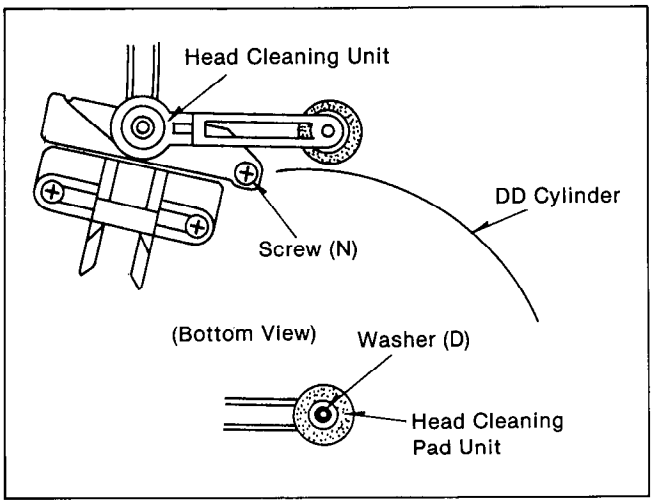


Figure R18

3-10. MODE SWITCH MAINTENANCE PROCEDURES

A. Replacement of the Mode Switch

1. Place the deck in the STOP mode.
2. Remove the Cassette Compartment Unit. (Refer to Disassembly Procedures)
3. Remove the Pinch Cam Cap and Pressure Roller Unit.
4. Remove the Pinch Cam.

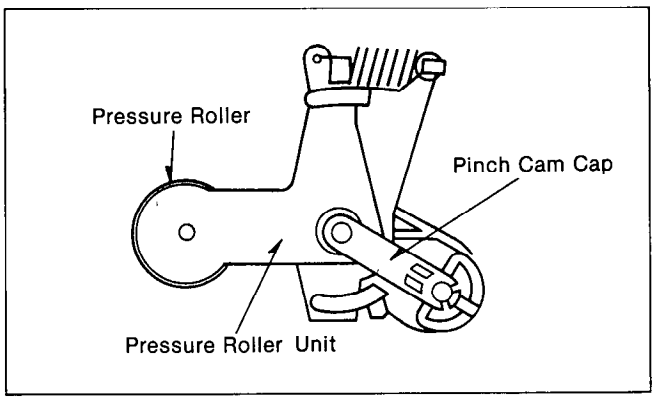


Figure R19

5. Unscrew 2 screws (P) and remove the Loading Motor Base.
6. Unscrew a screw (Q) and unsolder 5 of soldered portions.
7. Finally remove the Mode Switch.

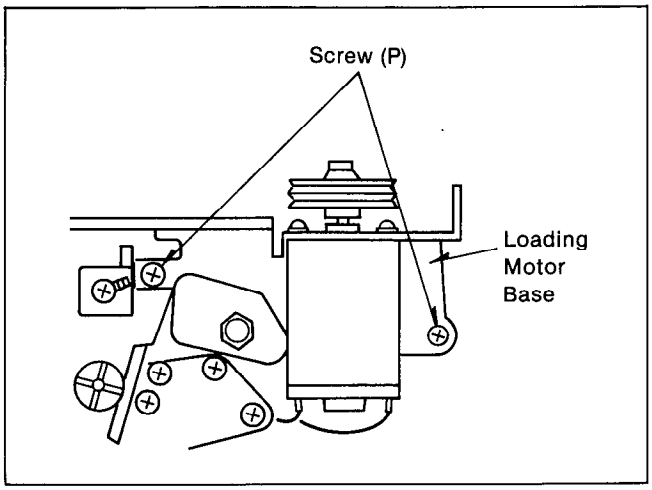


Figure R20

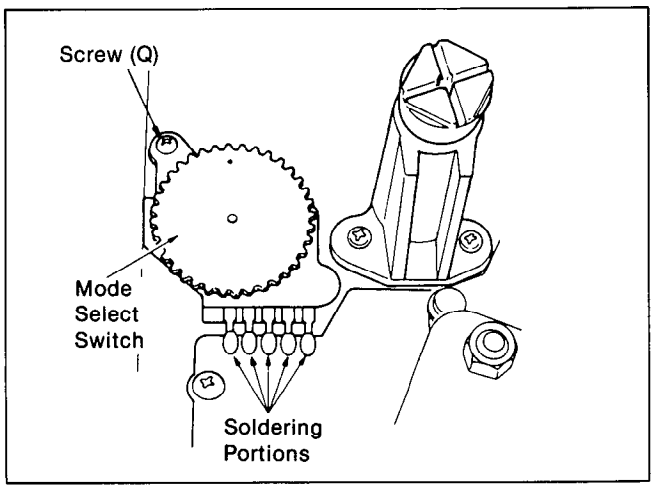


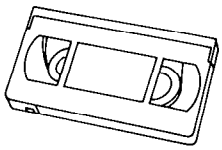
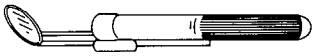
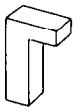
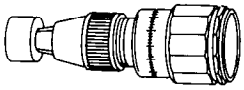
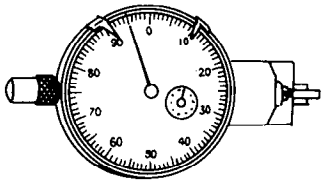
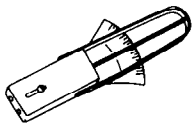
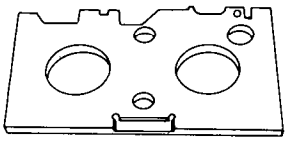
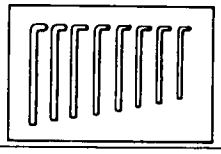
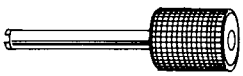
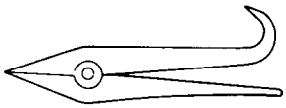
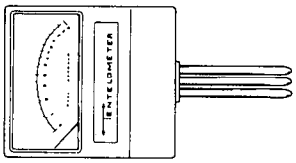
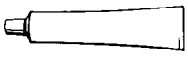
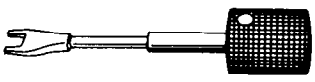
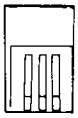
Figure R21

8. Install the Mode Switch and tighten screw (Q), then solder 5 soldering portions.
9. Install the Pinch Cam and Pressure Roller Unit. (Referto "Assembly Procedures of Pinch Cam & Pressure Roller Unit.")
10. Install the Loading Motor Base and tighten screw (P).
11. Install the Cassette Compartment. (Refer to Reinstallation of Cassette Compartment.)

MECHANICAL ADJUSTMENTS

The regular maintenance is important to maintain the initial specification of the deck and to prevent tape damage.
The specified servicing fixture must be used to conduct adjustment.
The following fixtures, tools and measuring equipments are required to conduct complete Mechanical Adjustments.

1. SERVICING FIXTURES & TOOLS

VFM8180HMDH VHS Alignment Tape 	VFK0343 Check Light 	VFK0344 Post Height Adjustment Fixture (P1) 
VFK0133 Dial Torque Gauge VFK0180 Plastic Clamper Only VFK0134 Adaptor for VFK0133 	VFK0190 Reel Table Height Gauge 	VFK66 Fan Type Tension Gauge 
VFK0191 Post Adjustment Plate 	VFK0330 Fine Adjustment Screwdriver (3mmφ)	VFK0326 Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3mm) 
VFK0329 Post Adj. Screwdriver 	VFK0335 Retaining Ring Remover (3mm/4mm) 	VFK0132 Back Tension Meter (Tentelometer, Made in U.S.A.) 
MOR265 Morlytone Grease (Cam Gear, Slide Section, Hyper Pressure Section etc.) 	VFK0328 H-Position Adj. Screwdriver 	VFK27 Head Cleaning Stick 
Cleaning Liquid (Alcohol) <Purchase Locally> (Tape Transport Rubber Parts etc.)	High Quality Machine Oil <Purchase Locally> (Reel Shaft. Capstan Shaft etc.)	

2. TAPE INTERCHANGEABILITY ADJUSTMENT PROCEDURES

2-1. ADJUSTMENT FLOW CHART

This flow chart describes the order of steps for adjusting the tape guide posts and A/C head in order to gain access to the items needing servicing. (Figures M1 and M2)

AFTER RE-INSTALLING THE UPPER CYLINDER OR LOWER CYLINDER

- 2-6. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 AND P3) (LINEARITY)
- 2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

AFTER RE-INSTALLING ALL POSTS OR IF ALL POSTS HAVE BEEN TURNED EXTREMELY

- 2-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 AND P3)
- 2-3. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT
- 2-5. TILT AND AZIMUTH ADJUSTMENT OF THE A/C HEAD
- 2-6. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 AND P3) (LINEARITY)
- 2-7. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT

AFTER RE-INSTALLING THE A/C HEAD

- 2-4. COARSE ADJUSTMENT OF THE A/C HEAD
- 2-5. TILT AND AZIMUTH ADJUSTMENT OF THE A/C HEAD
- 2-7. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT
- 2-8. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
- 2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

AFTER RE-INSTALLING THE PULL-OUT (P5) POST

- 2-3. ADJUSTMENT OF THE PULL-OUT (P5) POST HEIGHT

* **Note:**
Do not re-adjust any other posts.

Figure M1

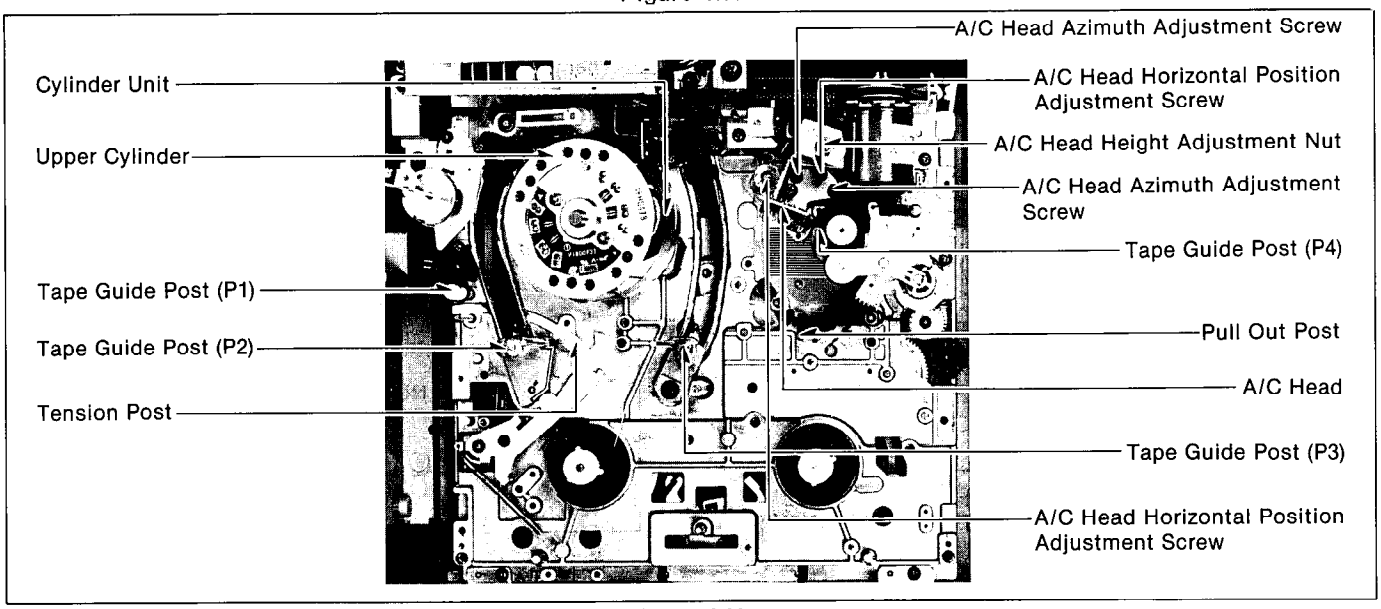


Figure M2

2-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

*Notes:
1. The Tape Guide Posts have been precisely adjusted at the factory. Therefore, normally do not change the height of the P2 and P3 Posts. The following adjustment is required only when replacing the posts.
2. To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

*Tools and Equipment Required:
Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190
Post Adjustment Screwdriver.....VFK0329
Check Light.....VFK0343
Hex. Wrench Set.....VFK0326

1. Remove the cassette compartment. (Refer to Disassembly Procedures)
2. Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M3.

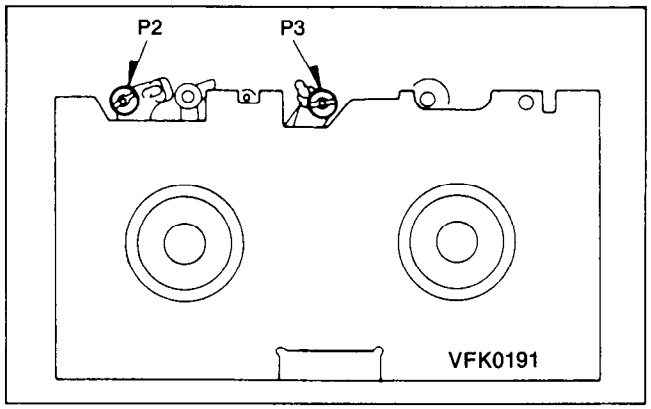


Figure M3

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of post becomes as shown in Figure M4. That is, the lower edge of Tape guide should be lower than surface of Adjustment Plate.

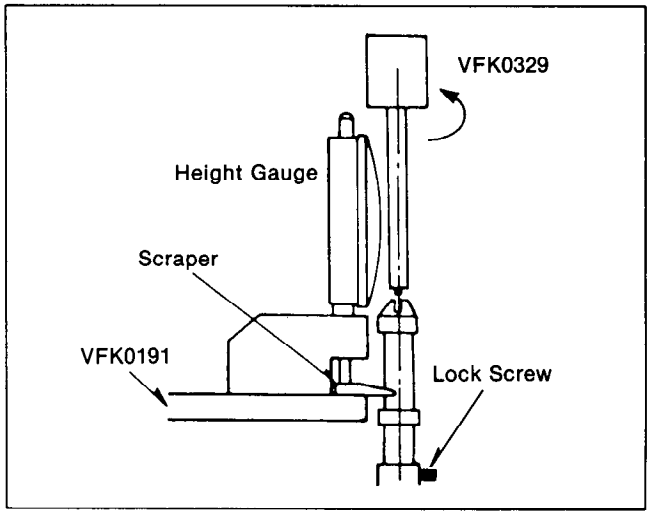


Figure M4

*Note: Before turning P2 and P3 posts, slightly loosen the Lock Screw using the Hex. Wrench.

4. Place the scraper of Reel Table Height Gauge as shown in Figure M5. Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

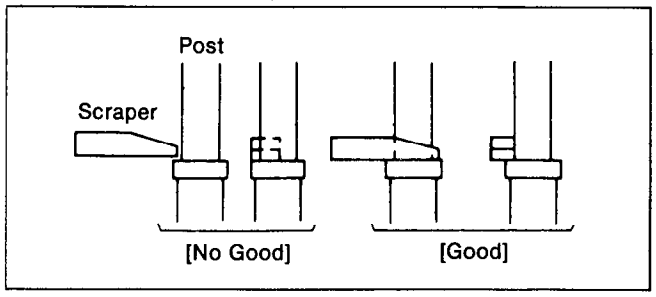


Figure M5

5. After the adjustment, install the cassette compartment referring to "Reinstallation of cassette compartment".
6. Play back the beginning portion of NV-T160 cassette tape, and confirm that tape travel as shown in Figure M6.

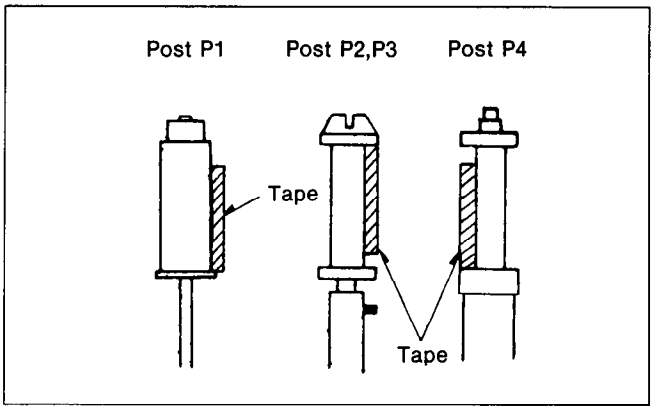


Figure M6

7. Make sure that the edges of the tape are not curling or waving at the bottom or top end of the posts P2, P3 by using the CheckLight.
8. If there are waving or frilling at the lower or upper edge of the P2 and P3 posts, readjust the heights of P2 and P3 Posts correctly as shown in Figure M7.

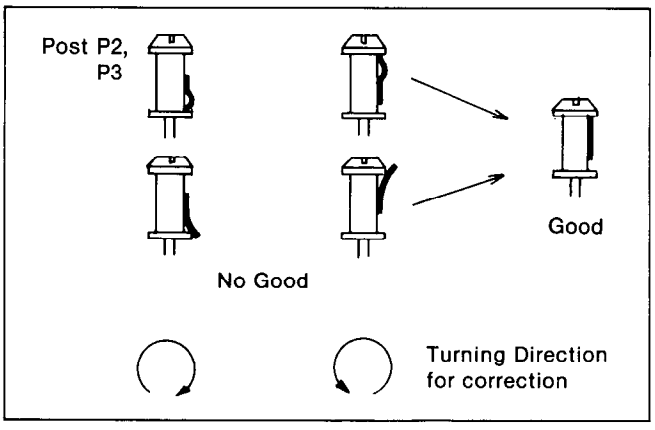


Figure M7

9. And confirm that the tape runs along the Cylinder Lead Correctly.

2-3. ADJUSTMENT OF THE PULL-OUT POST(P5) HEIGHT

***Tools and Equipment Required:**
Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190
Nut Driver.....(Purchase locally)

***Specification.....-0.03mm +/- 0.01mm**

*Note: Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment. (Refer to Disassembly procedures)
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Worm Shaft counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M8.

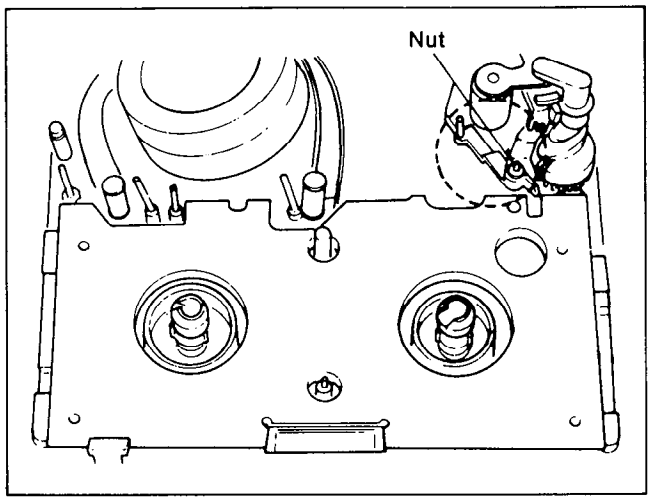


Figure M8

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero "0" as shown in Figure M9.

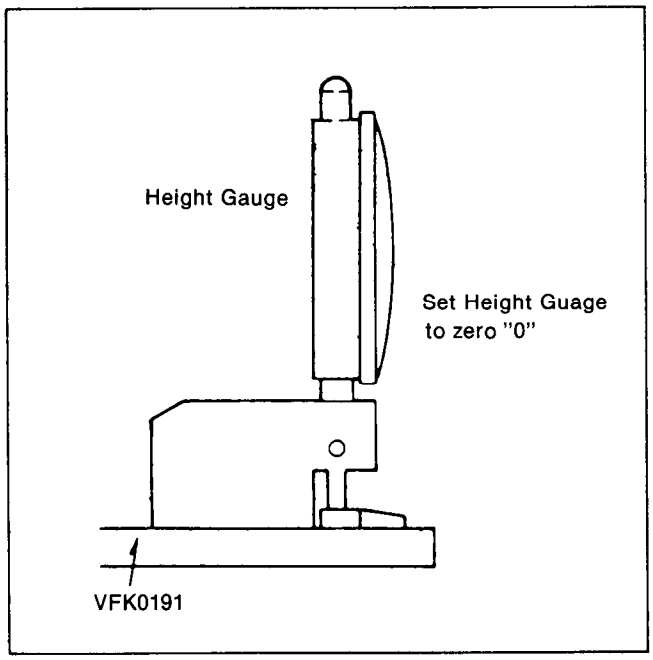


Figure M9

5. Place the Reel Table Height Gauge as shown in Figure M10 and turn the nut slowly until the gauge reads -0.03mm +/- 0.01mm.

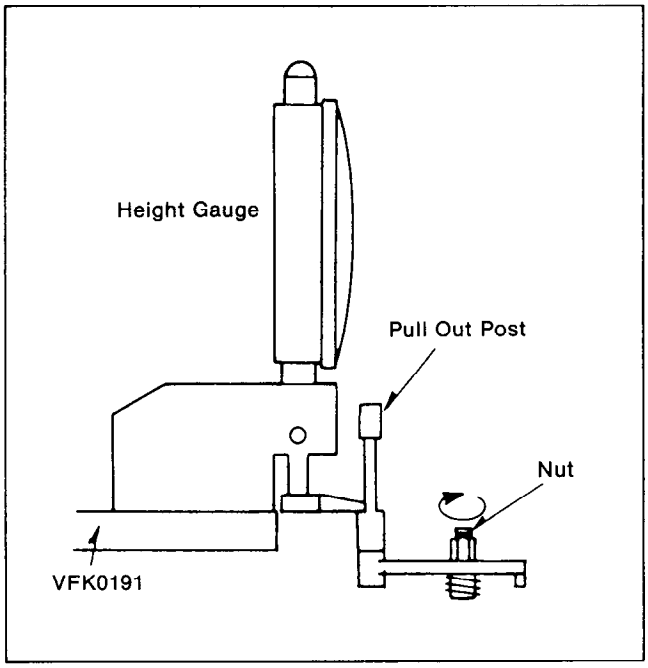


Figure M10

6. After the adjustment, install the cassette compartment. (Refer to "Reinstallation of Cassette Compartment").
7. Play back a normal cassette tape on Review Search mode, and make sure that the edges of the tape are not curling or waving at the bottom end of the P4 post by using the Check Light as shown in Figure M11.

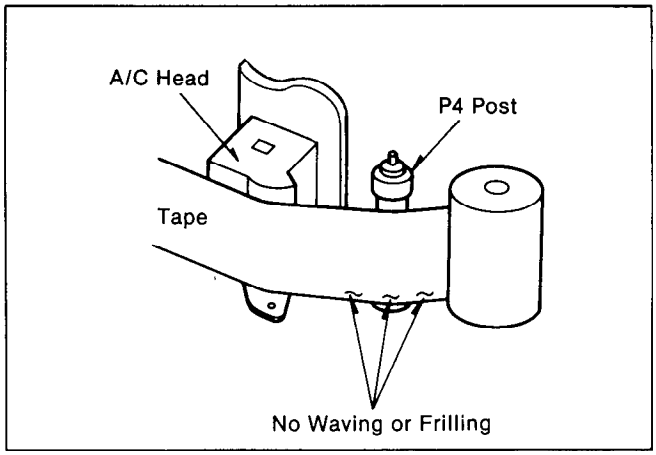


Figure M11

*Note: There is easy method to check Waving or Frilling. If there is Waving or Frilling in the lower edge, the white black pattern which is reflected on the tape will curve or not linear as shown in Figure M12.

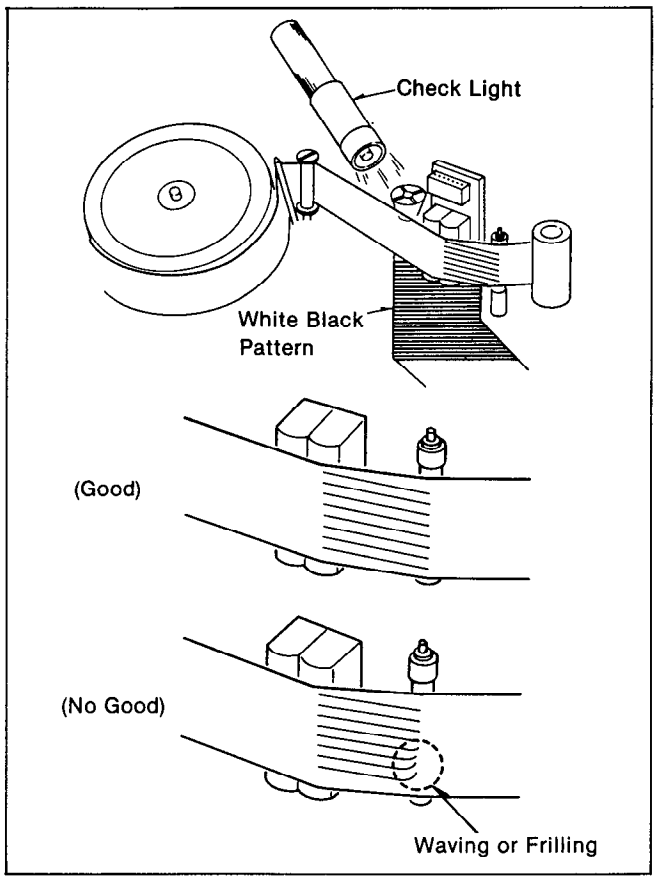


Figure M12

8. If curling appears, readjust P5 post.

2–4. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT

*Note: This procedure should be performed only when the A/C Head is replaced.

***Tools and Equipment Required:**
Check Light.....VFK0343
Nut Driver.....(Purchase locally)

1. With the tape running, look at the lower edge of the control head by using the check light.
2. Adjust the Nut (A) as shown in Figure M13 by turning the Nut (A) clockwise to lower the head, and counter–clockwise to raise it.

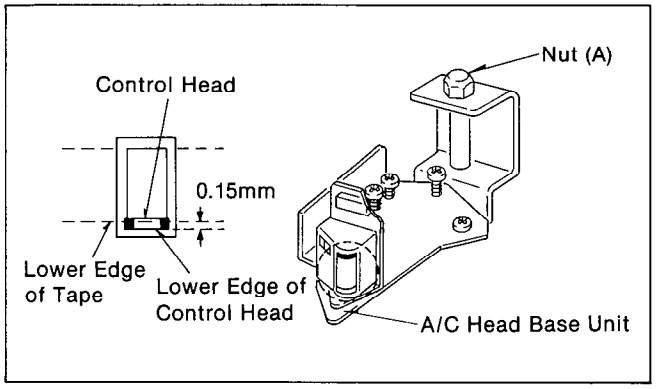


Figure M13

2–5. TILT & AZIMUTH ADJUSTMENT OF THE A/C HEAD

*Note: This procedure should be performed only when the A/C Head is replaced or posts heights are readjusted.

***Equipment Required:**
Alignment Tape.....VFM8180HMDH
Check Light.....VFK0343
VHS Video Tape

1. Play back a VHS Video tape which the amount of tape winding of a Supply Reel is more than the amount of tape winding of a Take up Reel. Turn a screw (B) to clockwise until Waving or Frilling appears in the lower edge of P4 post as Figure M11.

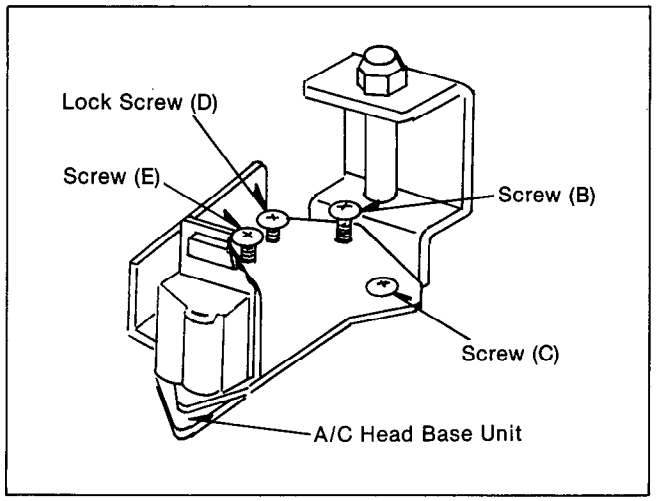


Figure M14

*Note: There is easy method to check Waving or Frilling. If there is Waving or Frilling in the lower edge, White Black pattern which is reflected on the tape will curve or not linear. (Figure M12)

2. Turn the screw (B) to counter–clockwise until waving or frilling do not appear in the lower edge of P4 post.
3. Connect the scope CH1 to TP4005 (Normal Audio Output CH1) and the scope CH2 to TP4006 (Normal Audio Output CH2) on the Audio & Video C.B.A.
4. Play back the 2–nd portion (Normal Audio 10KHz) of the alignment tape (VFM8180HMDH).
5. Adjust the screw (C) so that these phases of both channels match as shown in Figure M15.

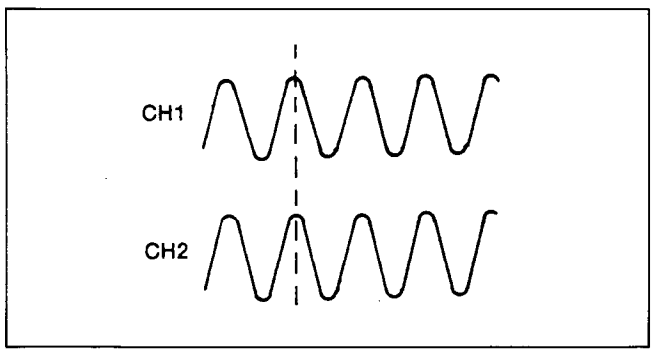


Figure M15

6. Adjust the screw (C) and (B) so that CH1 and CH2 output level become maximum, these phases of both channels much at the same time (Figure M16). During this adjustment the Lock screw (D) does not touch the A/C Head Base as shown in Figure M17.

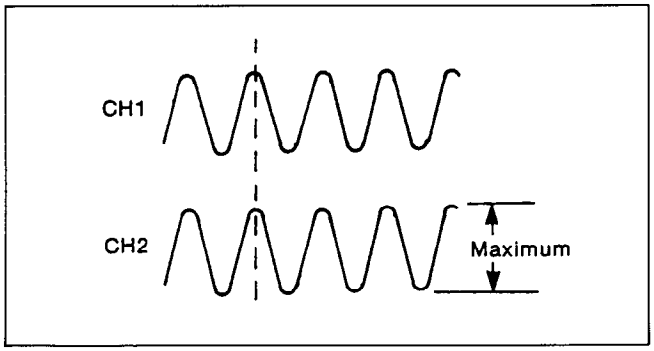


Figure M16

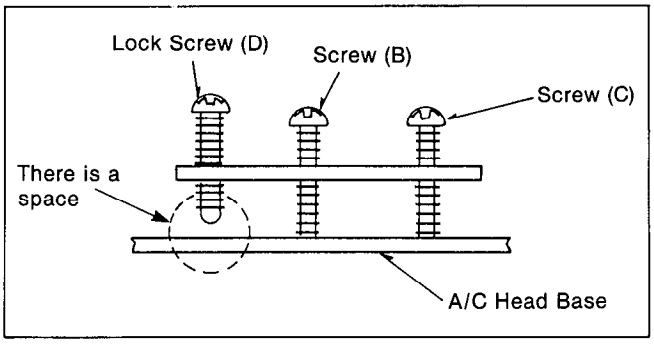


Figure M17

7. Turn the screw (C) to clockwise so that the difference of phases of both channels becomes 180 degrees as shown in Figure M18.

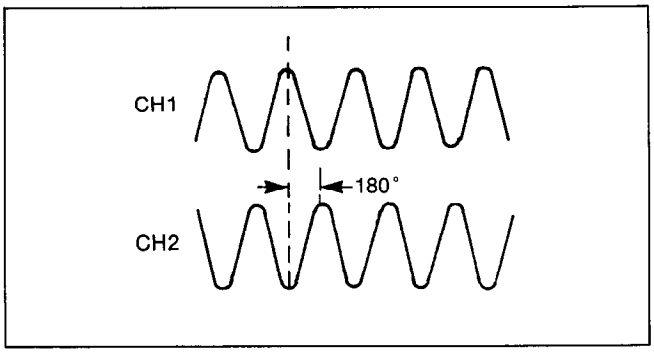


Figure M18

9. Tighten the Lock screw (D) so that these phases of both channels match as shown in Figure M15.

2–6. FINEADJUSTMENT OF THE TAPEGUIDE POST HEIGHT (P2 and P3) (LINEARITY)

*Tools and Equipment Required:
Alignment Tape VFM8180HMDH
Post Adjustment Screwdriver.....VFK0329

*Note: Before playing back the alignment tape playback a normal cassette tape and confirm correct transport.

1. Connect a scope to RF test terminal on the Front Panel and PG test terminal to Ext–Trigger the scope.
2. Play back the 2–nd portion (Monoscope 2) of the alignment tape (VFM8180HMDH).
3. Turn the Tracking Control VR and adjust for maximum VIDEO FM envelope.
4. If the RF envelope appears like example "A" or "B" in Figure M20 then adjustment of the tape guide post (P2 : Entrance) is necessary.
5. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Figure M20–"C".

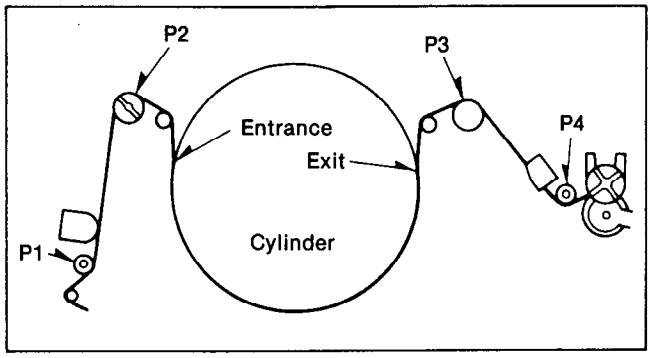


Figure M19

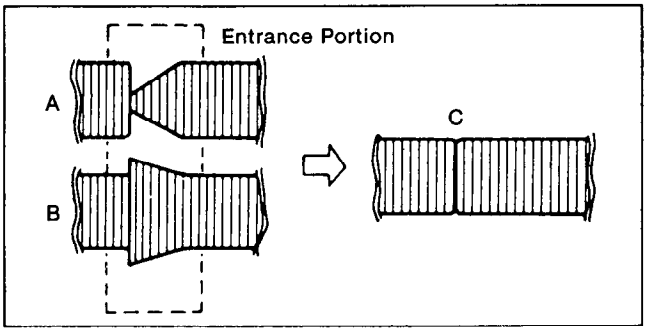


Figure M20

6. If the RF envelope appears like example "D" or "E" in Figure M21, then adjustment of the tape guide post (P3 : Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M21–"F".

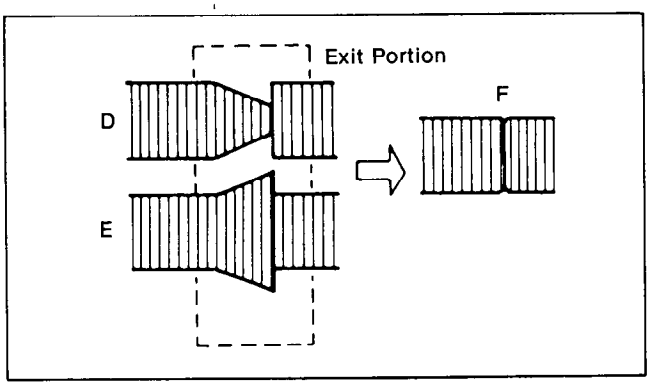


Figure M21

8. Turn the Tracking VR fully clockwise and counterclockwise. The output envelope should vary nearly parallel with other condition as shown in Figure M22.

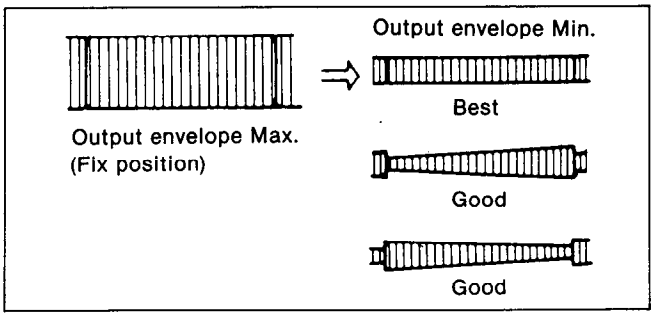


Figure M22

9. Turn the Tracking VR into center fix position and adjust for maximum RF envelope.
   If the RF envelope does not meet these specifications,

   V1/VO >= 0.7
   V2/VO >= 0.8
   V3/VO >= 0.7

   then repeat steps 4–9 again.

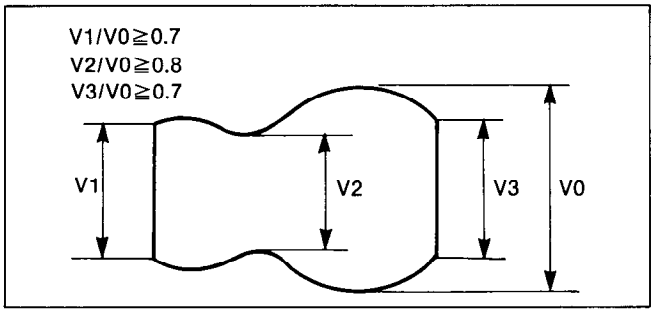


Figure M23

2–7. FINE ADJUSTMENT OF A/C HEAD HEIGHT

*Note; Before this adjustment "4–2–3. Coarse Adjustment of the A/C Head Height" be performed.

***Tools and Equipment Required:**
Alignment Tape.....VFM8180HMDH
Nut Driver.....(Purchase locally)

1. Connect a scope to TP4006 (Normal Audio CH2 Output) on the Audio & Video C.B.A.
2. Play back the 2–nd portion (Normal Audio 10kHz) of the Alignment Tape (VFM8180HMDH).
3. Adjust the Nut (A) (Figure M24) so that the CH2 output level becomes maximum as shown in Figure M25.

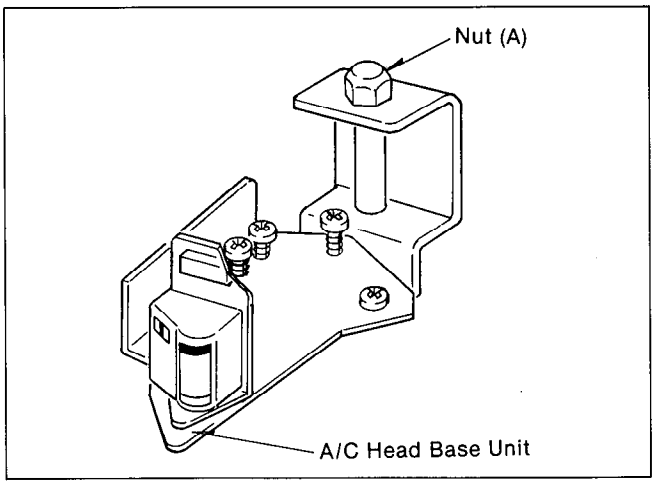


Figure M24

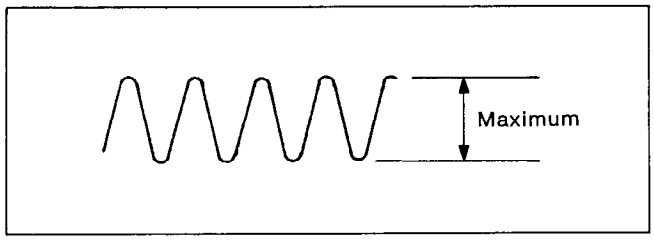


Figure M25

2–8. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X–VALUE)

*Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

***Tools and Equipment Required:**
H–Position Adjustment Screwdriver.....VFK0328
Alignment Tape.....VFM8180HMDH

1. Set the Tracking Control VR to the center detent (fixed) position.
2. Connect a scope CH1 to Video RF Test Terminal on the Front Panel and a scope CH2 to TP4006 (Normal Audio CH2 Output) on the Audio & Video C.B.A.
3. Play back the 4–th position (Monoscope 3 and Audio / Every 10–th field is skipped) of the Alignment tape VFM8180HMDH.
4. Adjust the A/C head horizontal position screw so that the phase of audio drop out and video RF envelope drop–out becomes the same as shown in Figure M26.

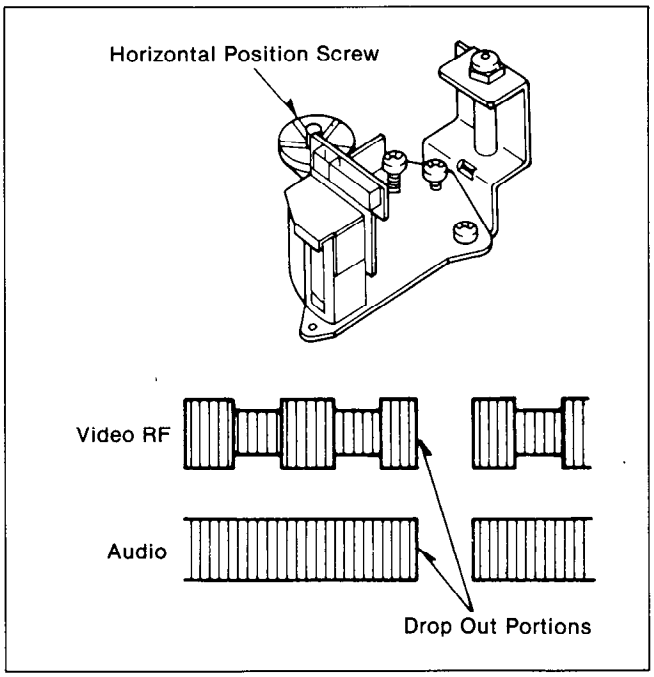


Figure M26 Horizontal Position Adjustment of A/C Head

*Note: After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop–out and Video RF envelope drop– out may be changed slightly.

2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

*Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

***Tools and Equipment Required:**
H-Position Adjustment Screwdriver.....VFK0328
Alignment Tape.....VFM8180HMDH

1. Set the Tracking Control VR to the center fix position.
2. Connect a oscilloscope to Video RF test Terminal on the Front Panel. 3. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8080HQFP).
4. Adjust the Horizontal Position Screw (Figure M25) of A/C head so that the RF signal becomes maximum level as shown in Figure M27.

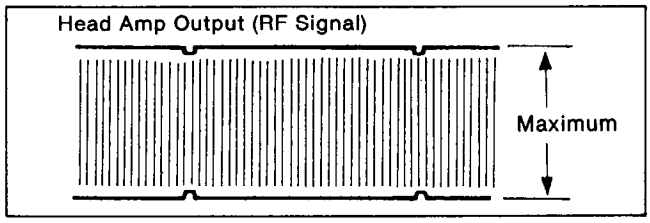


Figure M27

3-3. OTHER MECHANICAL ADJUSTMENT PROCEDURES

3-1. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

***Equipment Required:**
Back Tension Meter.....VFK0132
VHS Cassette Tape (120 minutes tape except S-VHS tape)

A. FWD Tension Adjustment

***Specification.....23~27g**

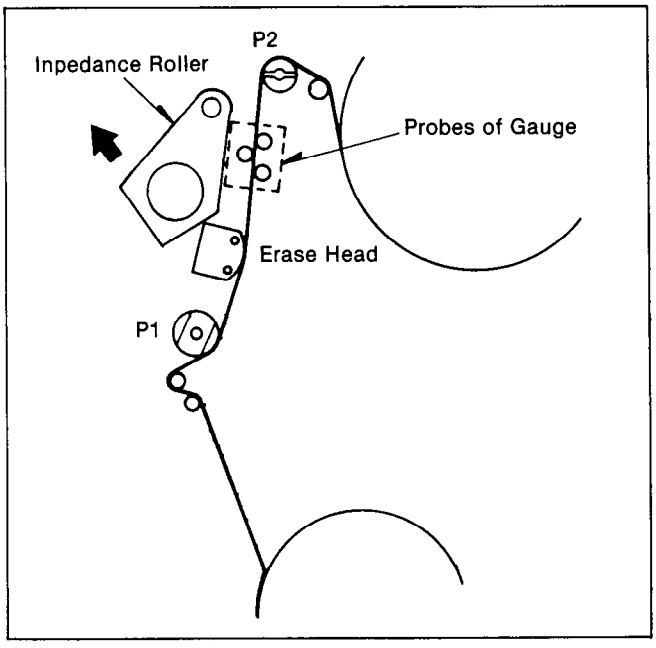


Figure 3-28 Measurement of Back Tension

1. Play back the cassette tape from the beginning and wait until the tape movement get the stabilization. (for approx. 10~20 seconds)
2. Pull the Impedance Roller in the direction indicated the arrow in Figure M28 secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
4. If it is out of specification, replace the Tension spring.

B. Rev Tension Adjustment

***Specification.....30~60g**

1. Play back the cassette tape on SP Reverse Play mode from the beginning and wait until the tape movement get the stabilization. (for approx. 10~20 seconds)
2. Pull the Impedance Roller in the direction indicated by the arrow in Figure M28 secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
4. If it is out of specification, replace the Tension spring.

*Notes:
1. While measuring, make sure that the three probes of the meter are all in good contact with the tape.
2. As the tension meter is very sensitive, we recommend taking 3 separate readings.

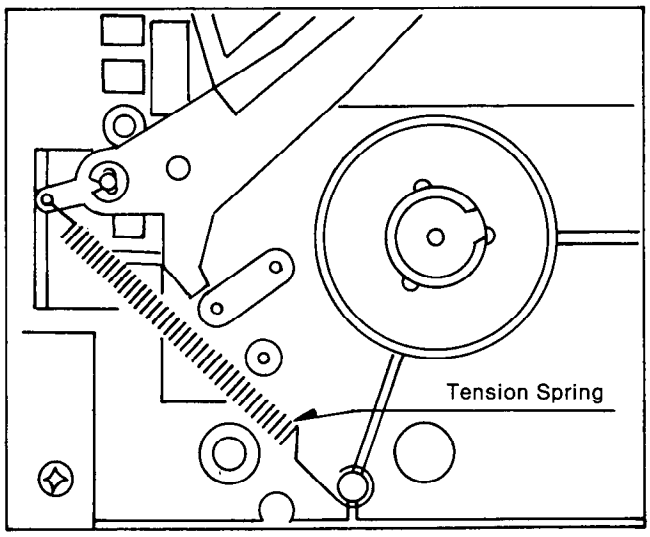


Figure M29

3-2. HEIGHT ADJUSTMENT OF THE REEL TABLES

***Equipment Required:**
Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190

***Specification.....0 – 0.15mm**

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero "0" as shown in Figure M30.

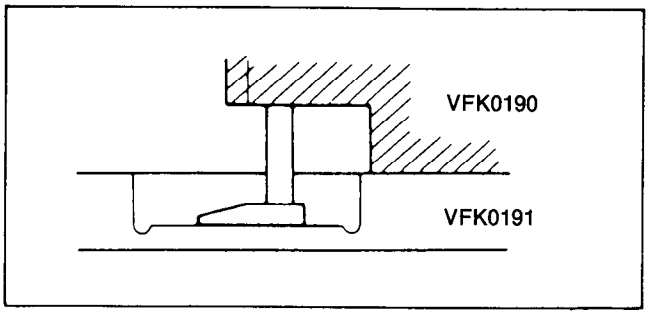


Figure M30

4. Measure the height of the top surface of either Reel Table and note the difference in height from the plate cut-out. (Figure M30 and M31) Repeat this procedures for the other Reel Table.

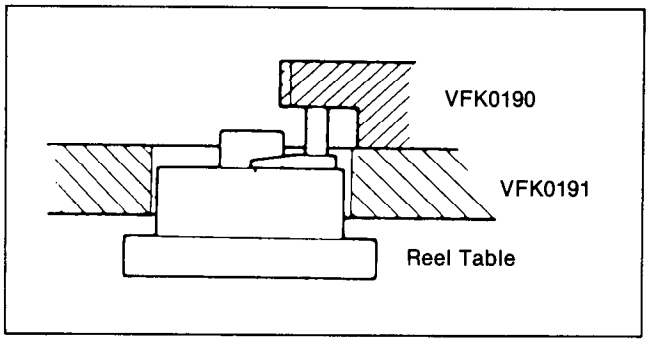


Figure M31

5. If the difference of Supply Reel table is more than 0.15mm higher or lower, replace the Supply Reel table. When the difference of Take Up Reel table is more than 0.15mm higher or lower, adjust nut (A)(Figure M32) so that measurement becomes the spec. If you can not adjust to the spec, replace Take Up Reel table.

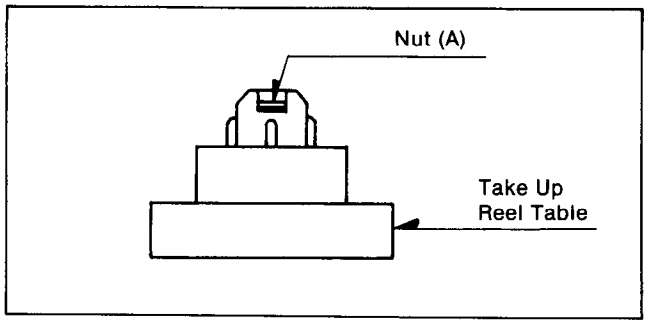


Figure M32

*Note: When replacing the tables, the DD Reel Unit needs to be removed from the chassis. Remove 6 screws and carefully lift it out as shown in Figure M33.

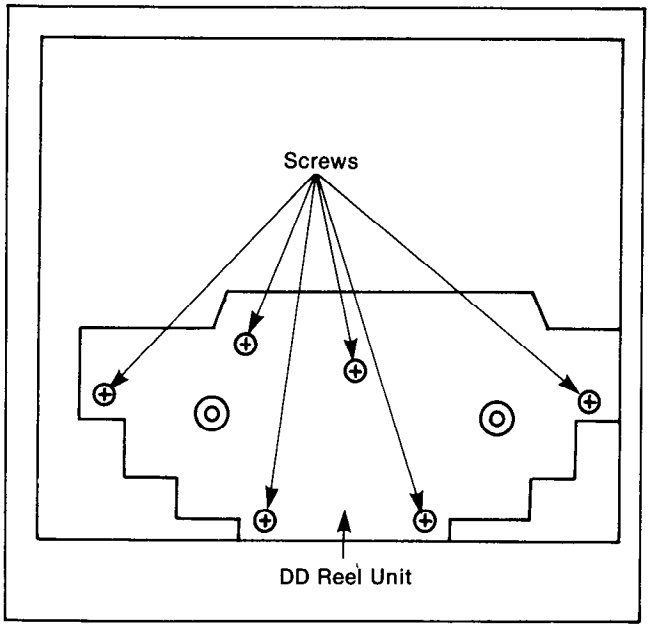


Figure M33 Bottom View of DD Reel Unit

When assembling the DD Reel Unit, slide a Main Rod to far left side by rotating the Center Gear, and then screw the 6 screws.

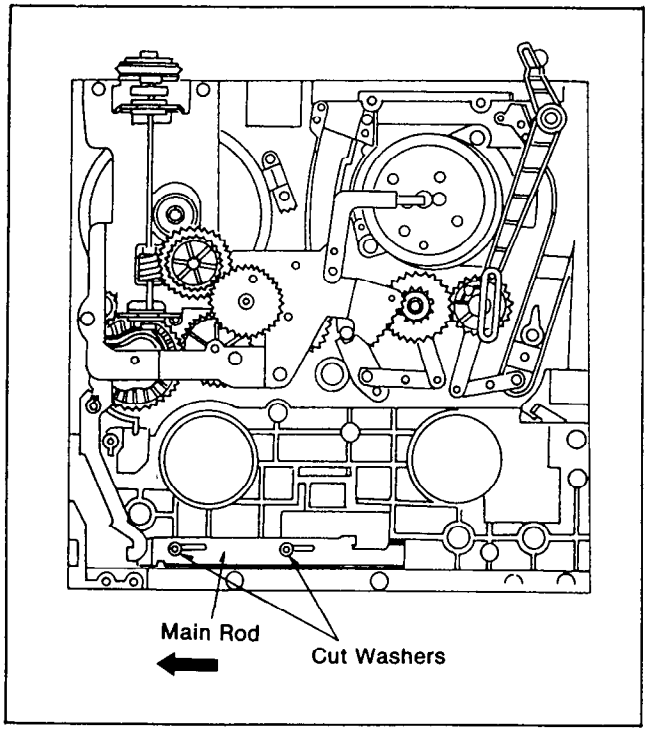


Figure M34

3-3. ADJUSTMENT OF THE CAPSTAN THRUST GAP

***Equipment Required:**
Reel Table Height Gauge.....VFK0190
Height Adjustment Fixture.....VFK0344

***Specification.....0.5mm +/– 0.05mm**

1. Turn a Thrust Adjust Screw slightly until the capstan rotor unit just touches the coil of the capstan stator unit.

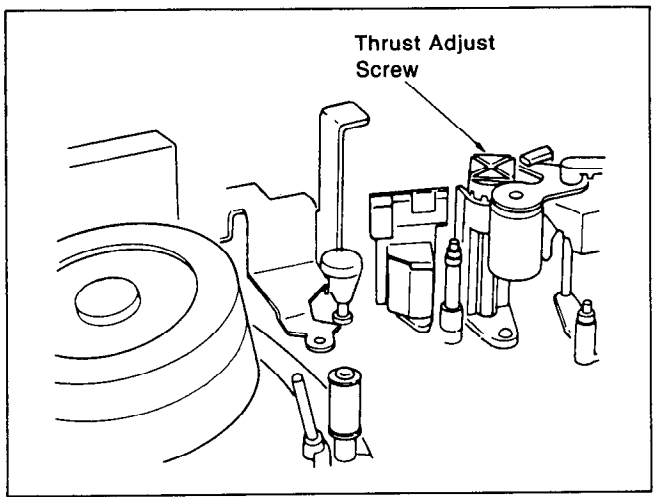


Figure M35

2. Unscrew 4 screws and remove the Gear Base Unit.
3. Set the Height Adjustment Fixture on the capstan Rotor unit as shown Figure M36.

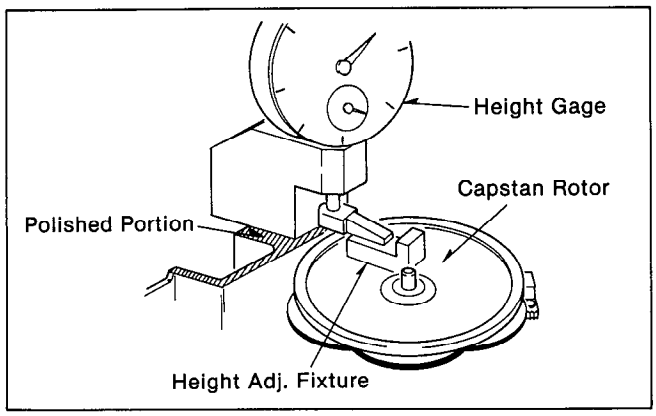


Figure M36

4. Adjust the Thrust Adjust screw so that the thrust gap becomes 0.5mm +/− 0.05mm.

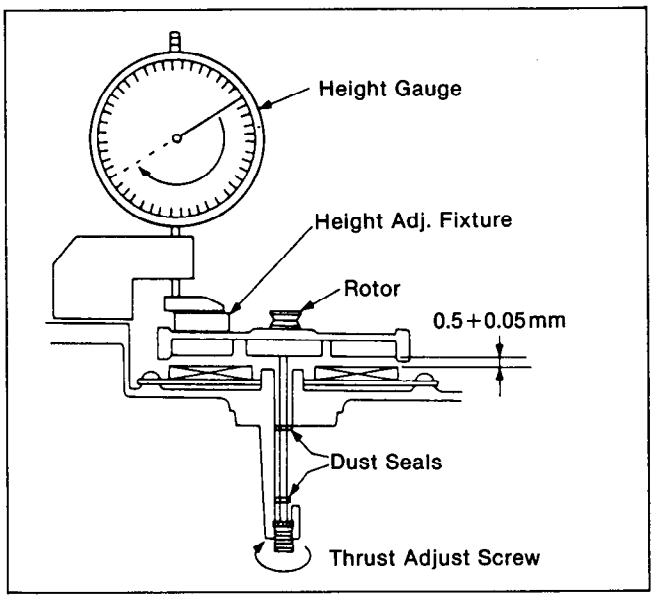


Figure M37

3–4. MEASUREMENT AND ADJUSTMENT OF THE BRAKE TORQUE

***Equipment Required:**
Torque Gauge.....VFK0133
Adapter for Gauge.....VFK0134

1. Remove the top cover and the cassette compartment.
2. Attach the adapter to the torque gauge and place the deck in STOP mode (Subloading mode).
3. Place the torque gauge on the reel table as shown in Figure M38. The weight of the gauge should not rest on the reel table.
4. Turn the torque gauge in the direction indicated in Figure M39 until the brake begins slipping and read the gauge.

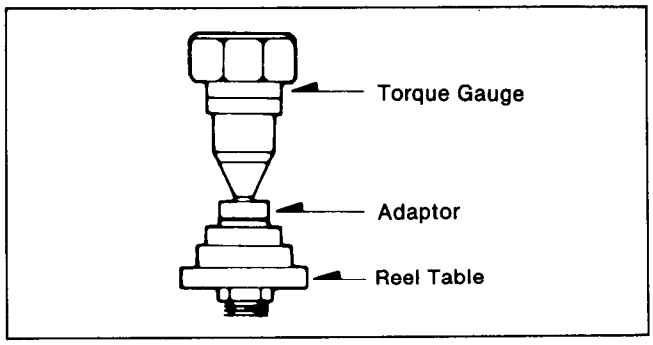
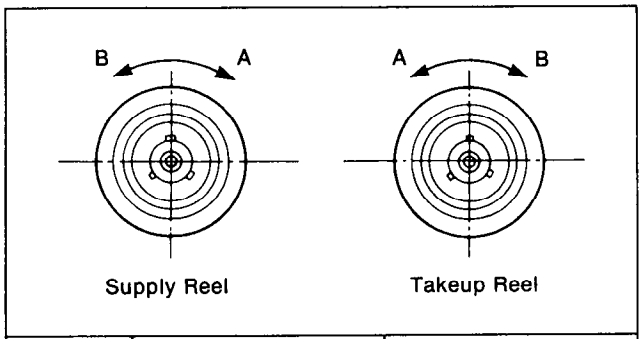


Figure M38 Measuring Method



	A	B
Takeup	more than 550g-cm	more than 50g-om
Supply		more than 40g-cm

Figure M39 Specification of Brake Torque

5. If it is out of specification, replace the Brake Spring.

*Note: If the proper brake torque cannot be obtained by replacing the Brake Spring, clean the braking surface of the reel table with a soft cloth and re-measure the brake torque. If it's still out of specification, replace the Main Brake (S) or (T) Unit.

3-5. CONFIRMATION OF PRESSING FORCE AND POSITION ADJUSTMENT OF PRESSURE ROLLER UNIT

***Equipment Required:**
Fan – Type Tension Gauge.....VFK66
VHS 120 min. Cassette Tape (Except S-VHS Tape)

1. Remove the Cassette Compartment.
2. Play back the end portion of VHS tape.
3. Set Fan-Type Tension Gauge to the part (A) of Pinch Roller Unit.
4. Press the Arm with the Gauge, in the direction indicated by the arrow as show in Figure M40.
5. Confirm that the reading of the Tension Gauge is 1,050g +/- 230g at the moment of the tape stop.
6. If it is out of spec., replace the Pinch Pressure Spring.
7. Confirm that the reading of the clearance (T) is more than 0.5mm. (Figure M41)
8. If it is out of spec, replace the Pressure Roller Unit.

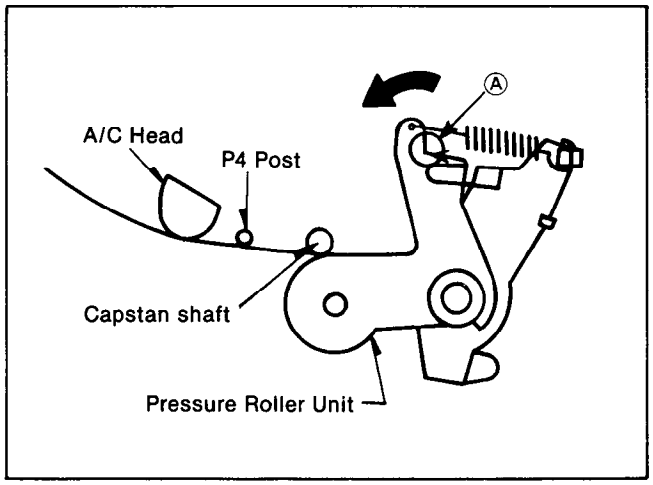


Figure M40

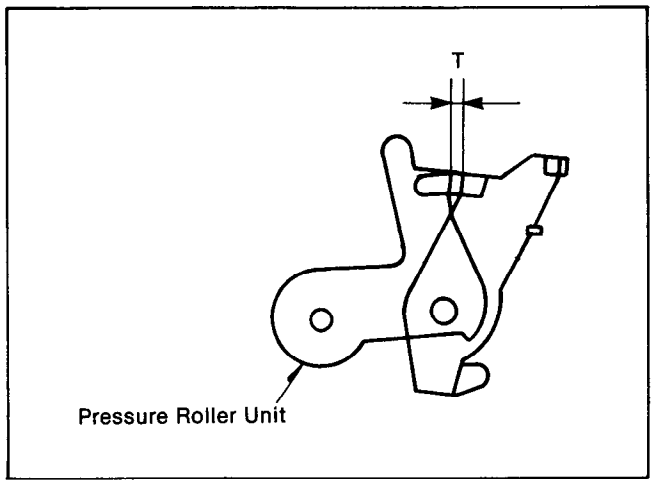


Figure M41

3-6. ADJUSTMENT OF FG HEAD GAP

***Specification.....0.17~0.18mm**

1. Slightly loosen 2 screws. (FigureM42)
2. Put the paper which is used for cover page of this volume into the gap between F.G.Head and Capstan rotor. (The thickness of the cover page is approx. 0.17mm).
3. After adjustment, tighten 2 screws.

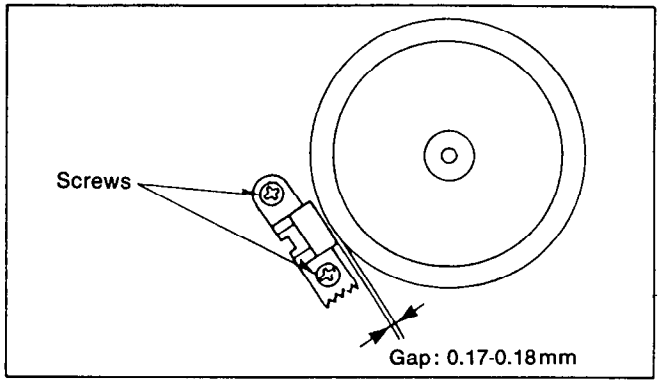


Figure M42

*Note: Do not touch the surface of rotor and keep any magnetizable material away.

4. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch.
Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.
If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped.
And it will result being damaged at any mechanical or electrical parts.
The overall mechanical condition (alignment) of bottom and top view are shown in Figure M43 and Figure M44. This mechanical adjustment is performed in the "STOP" mode.

4-1. CONFIRMATION OF ALIGNMENT CONDITION

1. Remove the Loading Belt.
2. Unscrew 4 screws and remove the Gear Base Unit. (Figure M43)
3. Turn the Center Gear to counter-clockwise until 2 big holes of Center Gear align with 2 big holes of Retainer Gear and Ring Gear and Chassis as shown in Figure M45.
4. Identification hole on the Mode Select Switch at 6 o'clock position and aligned with small hole on Pinch Cam as shown in Figure M44.
5. P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
6. Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 o'clock position.
7. Pressure Roller Unit is "UP" position.

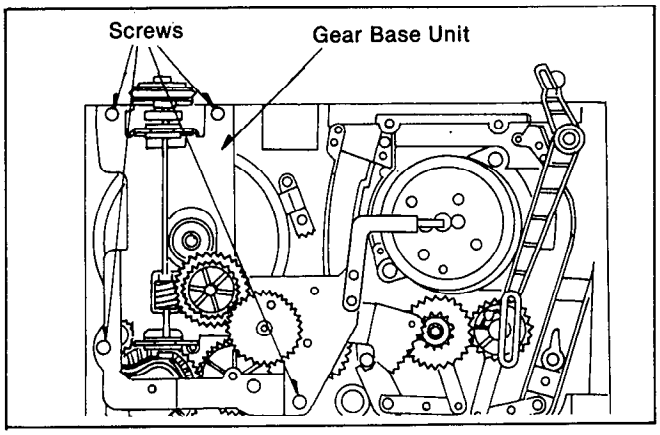


Figure M43

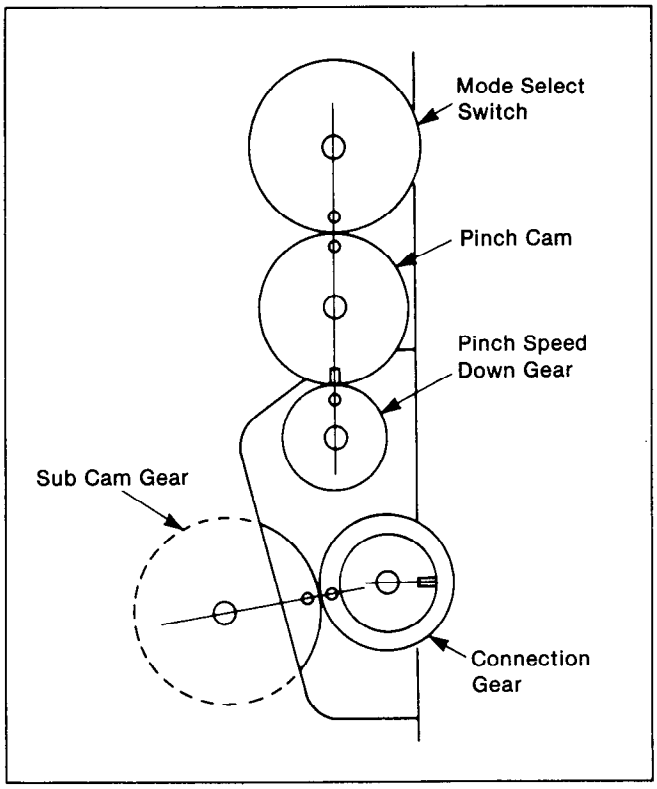


Figure M44 Top View of Overall IQ-Mechanical Condition

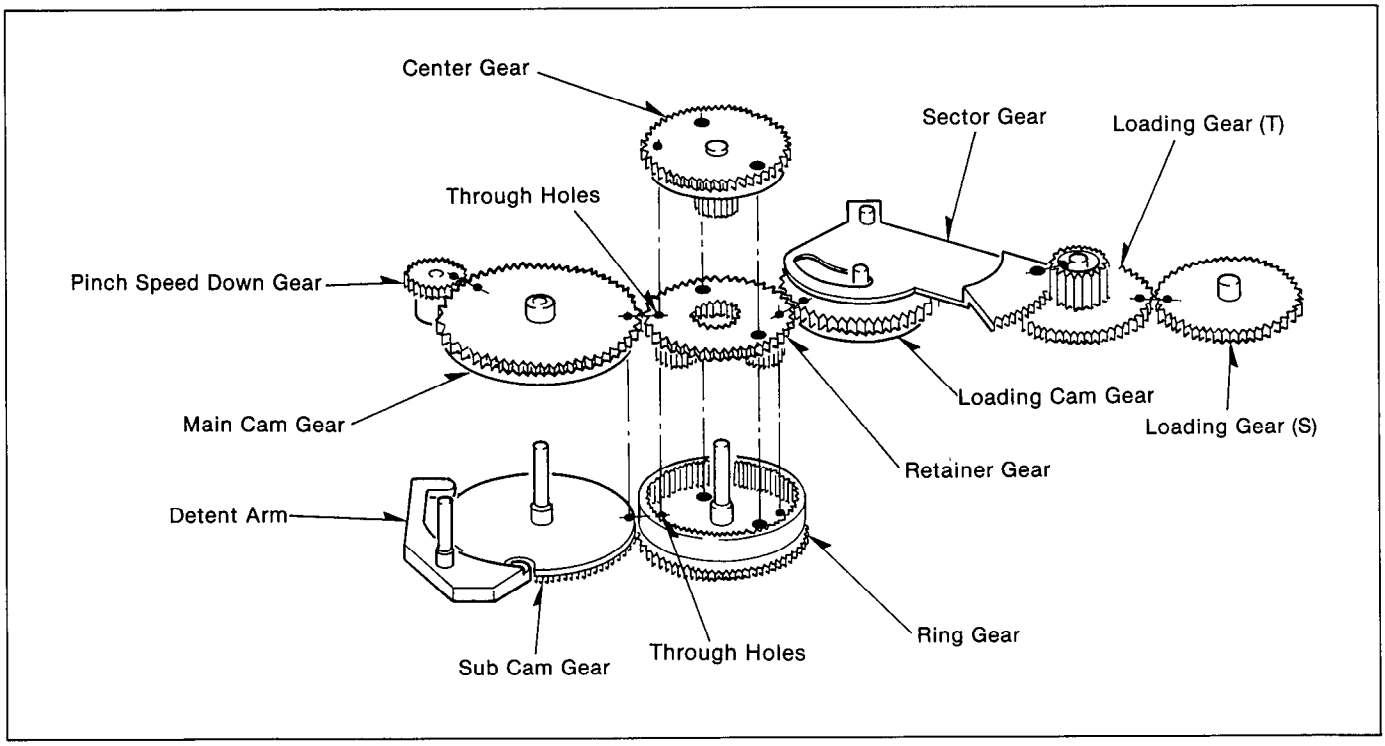


Figure M45 Bottom View of Overall Mechanical Condition

4–2. ASSEMBLY PROCEDURES OF SUB CAM GEAR, RING GEAR AND DETENT ARM

1. Install the Ring Gear so that the two holes on the Ring Gear align with the two holes on the chassis as shown in Figure M46.
2. Install the Sub Cam Gear so that the large hole on Sub Cam Gear aligns with the hole on chassis. Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M46.
3. Confirm that the small hole on Sub Cam Gear is aligned with the small hole on Connection Gear as shown in Figure M44 (In case of the Connection Gear is already installed).
4. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M46.

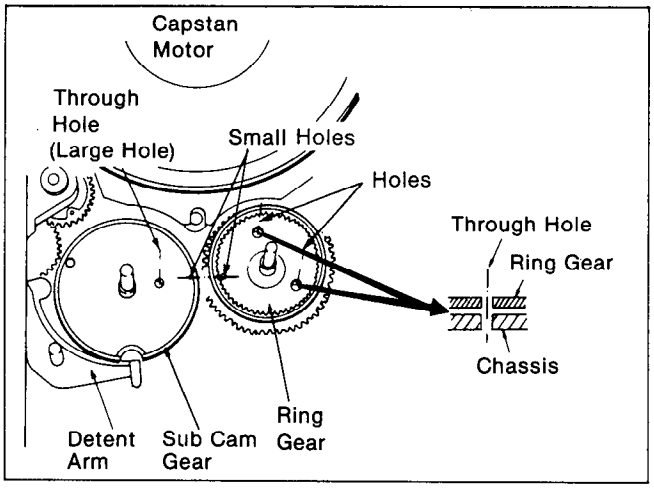


Figure M46

4–3. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

1. Install the Main Cam Gear onto the Sub Cam Gear so that the small hole on the Main Cam Gear aligns with small hole on the Ring Gear as shown in Figure M47.
2. Insert a retaining ring.
3. Install the Pinch Speed Down Gear from top side of chassis so that the small hole on the Main Cam Gear aligns with small hole on the Pinch Speed Down Gear as shown in Figure M47.

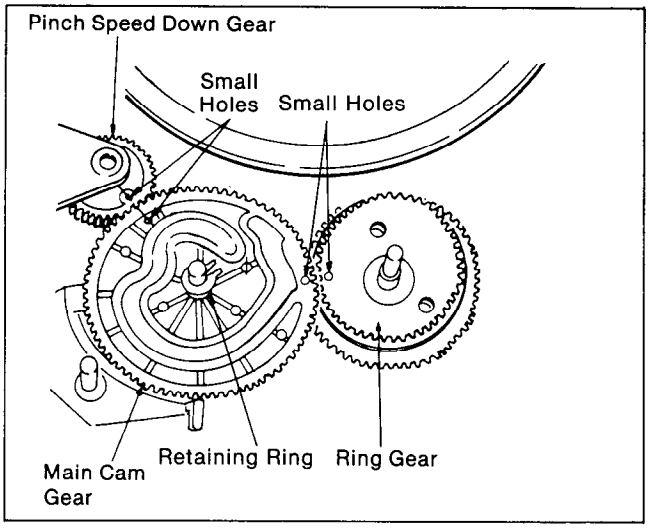


Figure M47

4–4. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

1. Install the Retainer Gear onto the Ring Gear so that the two holes on the Retainer Gear align with the two holes on the Ring Gear, at this time, small hole on the Main Cam Gear should aligns with small hole on the Retainer Gear as shown in Figure M48.
2. Install the Loading Cam Gear so that the small hole which is directly outside of the large hole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M48.

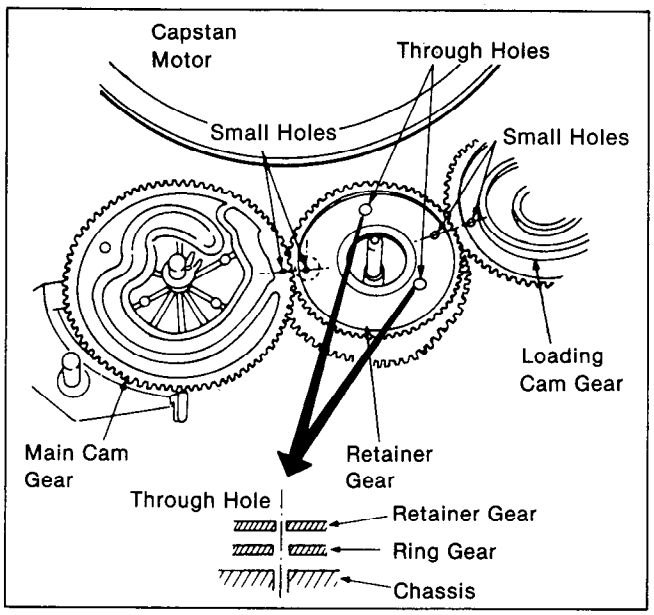


Figure M48

4–5. ASSEMBLY PROCEDURES OF CENTER GEAR

1. Softly Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M49.

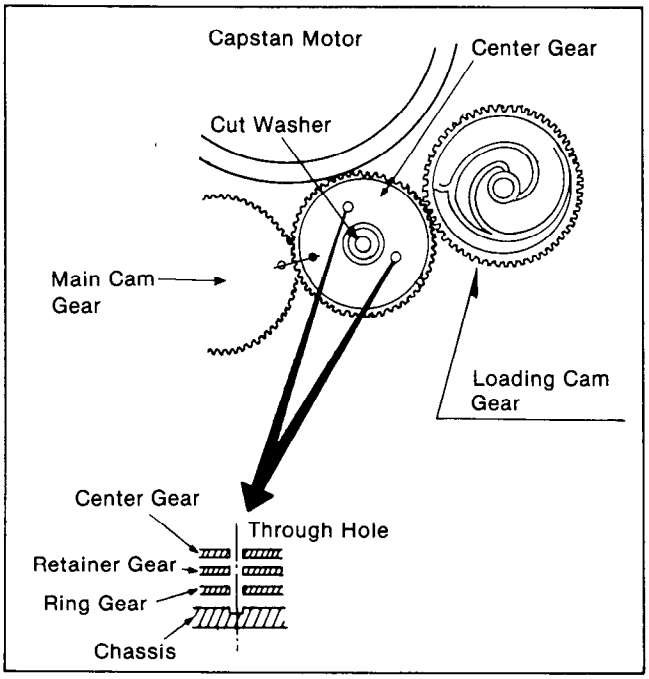


Figure M49

4–6. ASSEMBLY PROCEDURES OF MAIN LEVER AND CAM FOLLOWER ARM UNIT

1. Install the Main Rod and then insert the cut washers as shown in Figure M50.
2. Install the Cam Follower Arm so that the pin of the Cam Follower Arm inserts into the groove of the Main Cam Gear and also inserts into the slot on the Main Rod, insert the retaining ring.

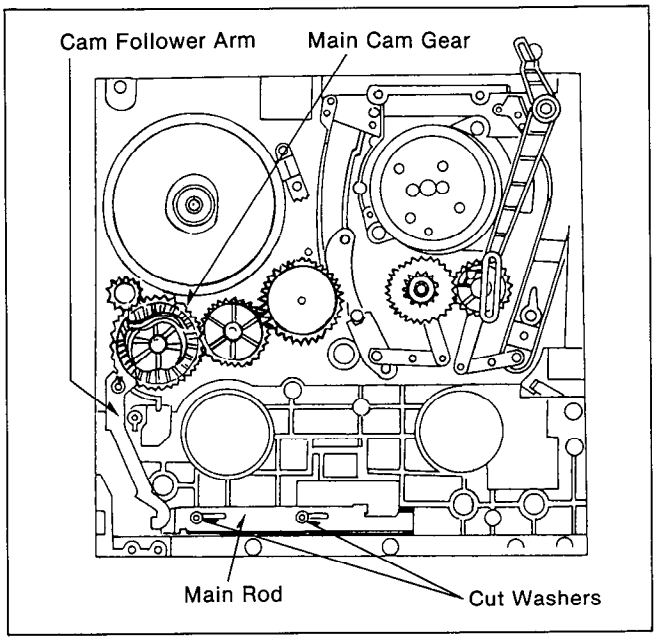


Figure M50

4–7. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR

1. Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole on the Loading Gear (T) aligns with the outer hole on the Loading Gear (S) as shown in Figure M51.
2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T).
3. Insert 3 retaining rings as shown in Figure M52.

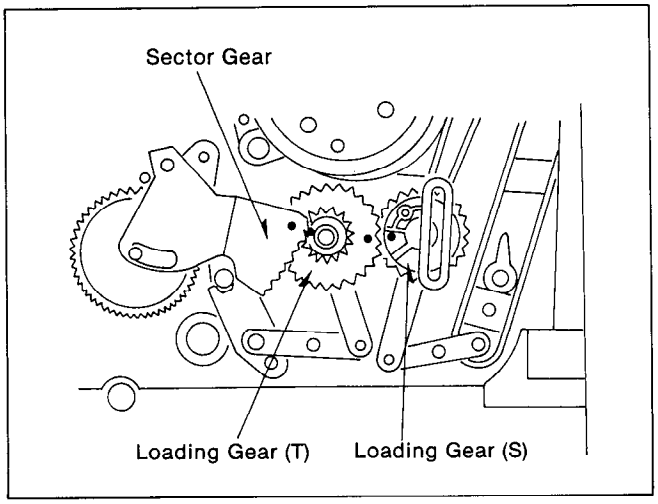


Figure M51

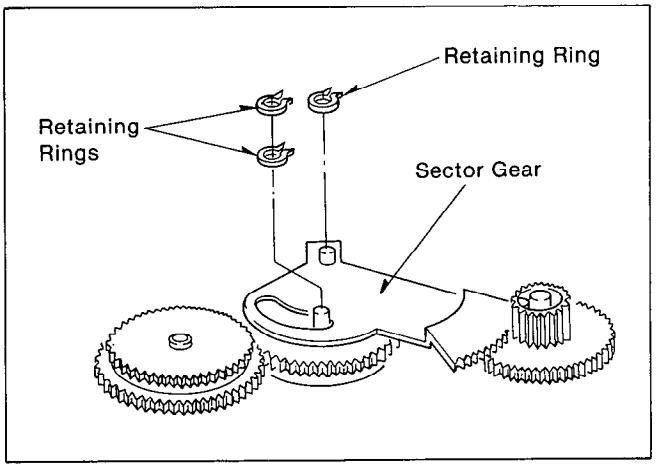


Figure M52

4–8. ASSEMBLY PROCEDURES OF CONNECTION GEAR

*Note: Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (Figure M44).

1. Install the Connection Gear so that the small hole on the Connection Gear aligns with the small hole on the Sub Cam Gear as shown in Figure M53.

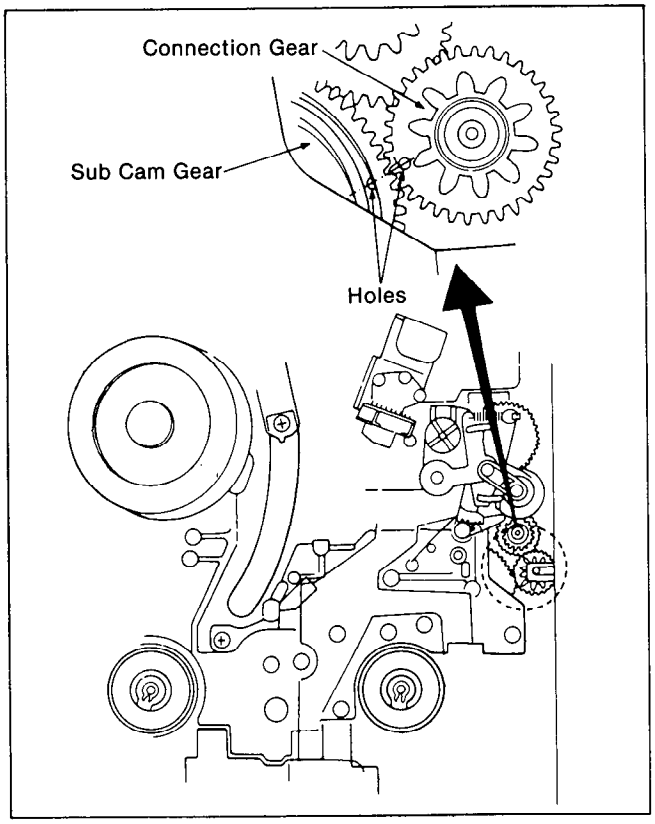


Figure M53

4-9. ASSEMBLY PROCEDURES OF MODE SWITCH AND P5 PULL OUT SECTOR GEAR

1. Turn the Center Gear to unloading position.
2. Install the Mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
3. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of gear at P5 Arm as shown in Figure M54.

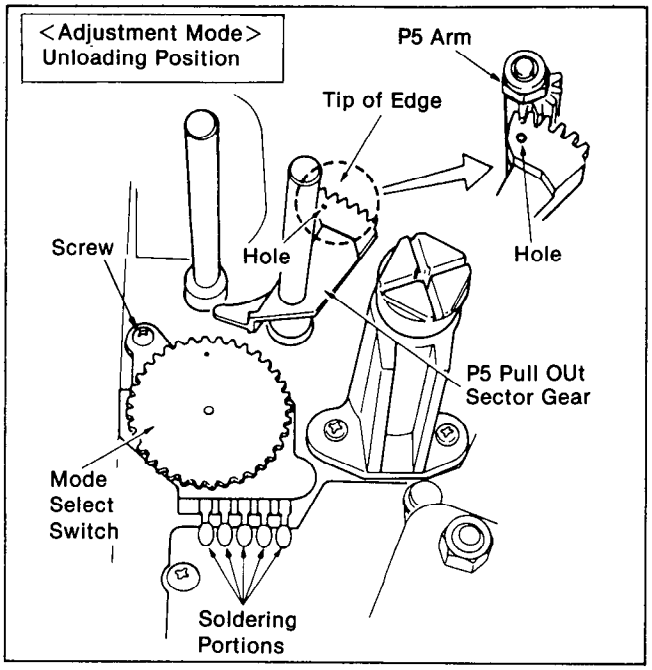


Figure M54

4-10. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

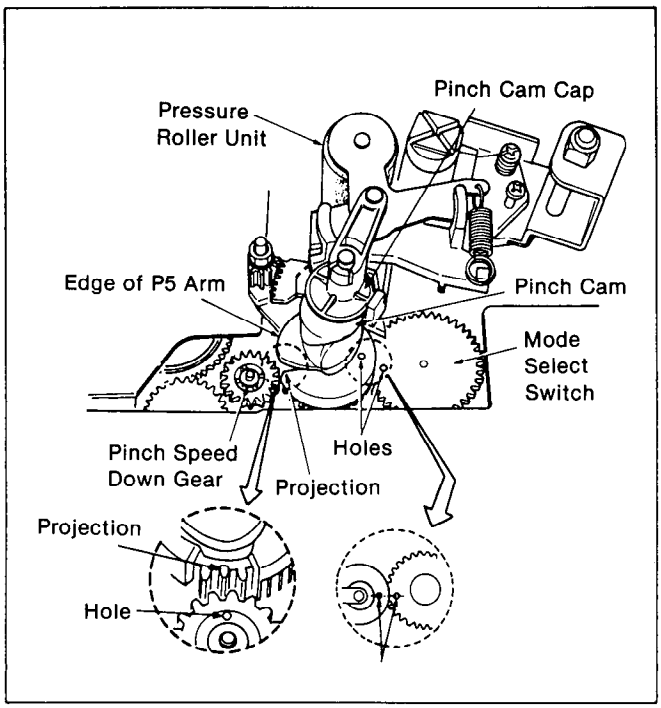


Figure M55

1. Install the Pinch Cam while pushing the P5 post forward. The gear of the Pinch Cam should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear as shown in Figure M55.
2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

4-11. ASSEMBLY PROCEDURES OF GEAR BASE UNIT

1. Install the Gear Base Unit and screw 4 screws as shown in Figure M56.

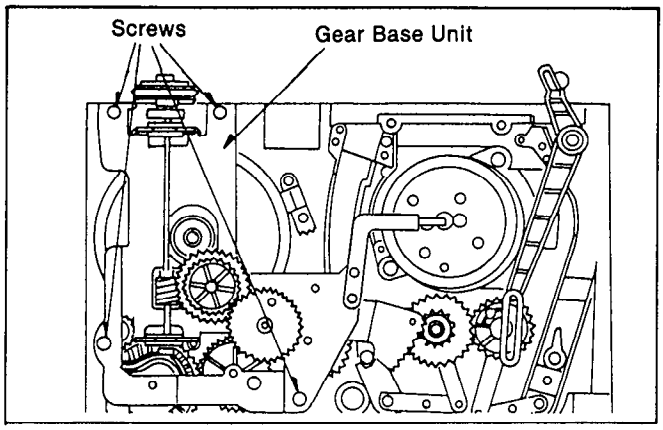


Figure M56

*Note: The Gear Base Unit has 2 gears and wormshaft. There is no adjustment for these gears

4-12. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP Alignment Condition

1. Turn the Wormshaft counter-clockwise or clockwise until mechanism is placed into the Alignment Condition as following conditions.
   a) Identification hole on the Mode Select Switch at 6 o'clock position and aligned with small hole on Pinch Cam. (Figure M55)
   b) P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
   c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear (Figure M53) and rectangular mark on the Connection Gear should be at a 3 o'clock position.
   d) Pressure Roller Unit is "UP" position.

B. Confirmation of Cassette Compartment

1. Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M57.

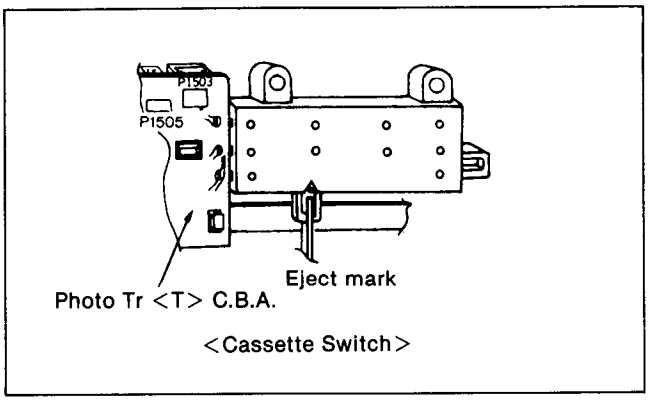


Figure M57

2. Remove 2 screws (A) as shownin Figure M58.
3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Figure M59.

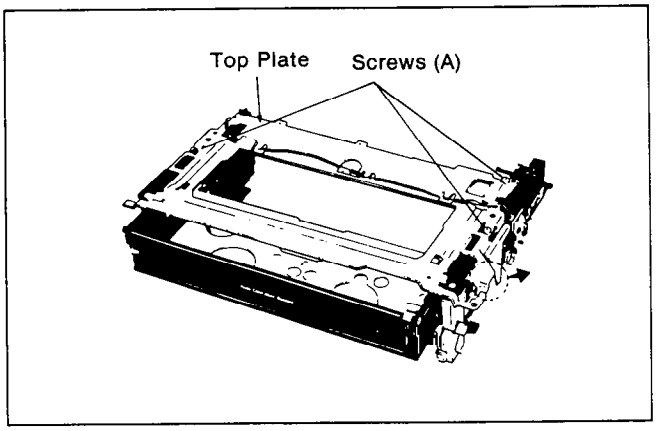


Figure M58

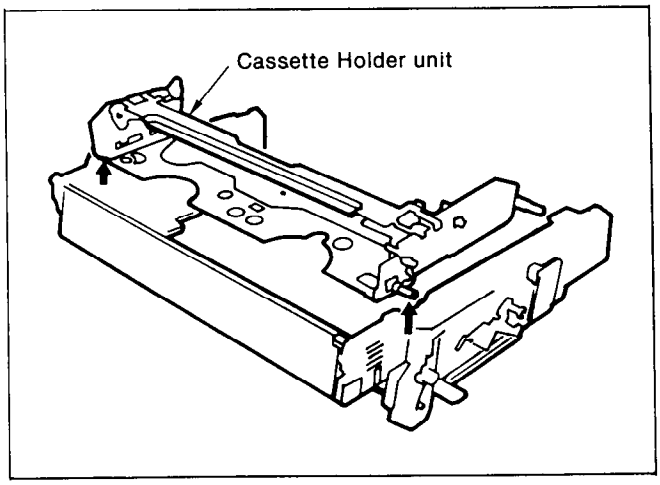


Figure M59 Removal of cassette holder unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP) completely as shown in Figure M60 and keep it. In this position, the arrow on the Sub Wiper Arm (R) should align with the arrow on the Rack (A)(1) Unit as shown in Figure M61.

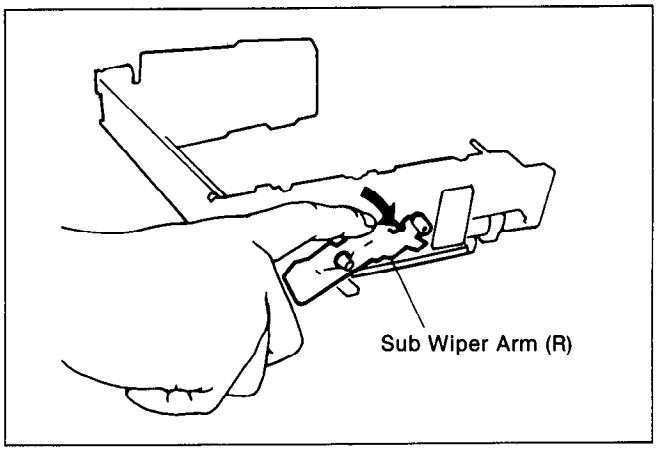


Figure M60

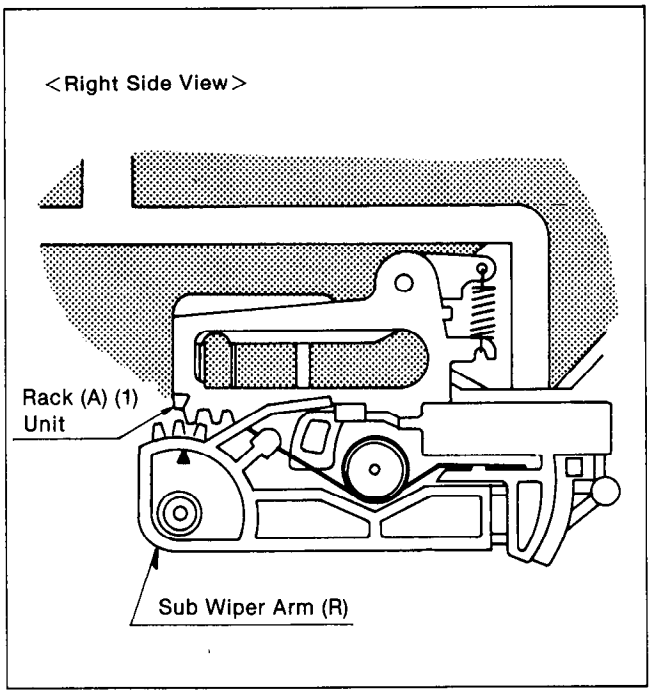


Figure M61

6. If the Cassette Compartment is not aligned, re-alignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly. This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

1. Bring loading mechanism to the STOP (Sub-load) position.
2. Confirm that the chassis is aligned properly for Alignment Condition as shown in Figure M44 and M45.
3. Put the Sub Wiper Arm (R) in it's full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plate).
4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M62 and M63.

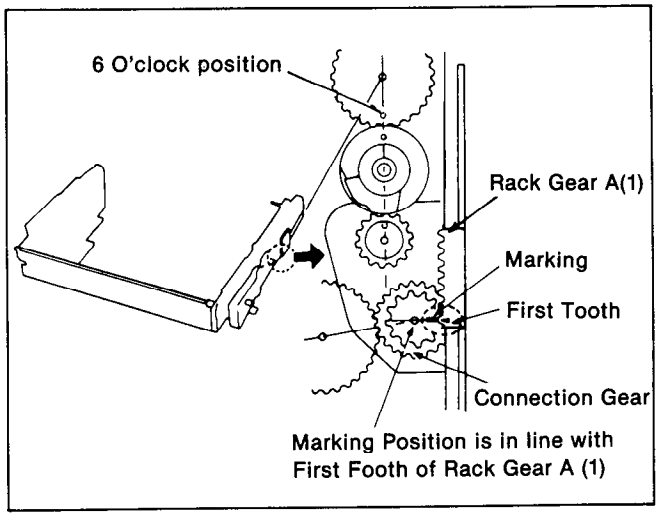


Figure M62

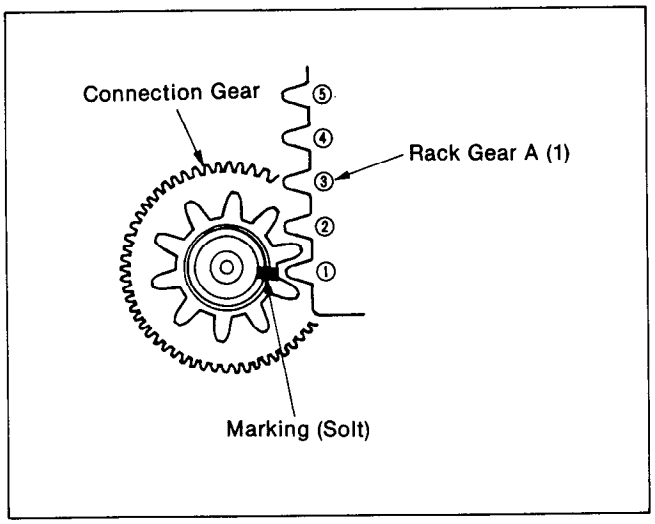


Figure M63

5. Tighten the 4 screws (D) as shown in Figure M64.

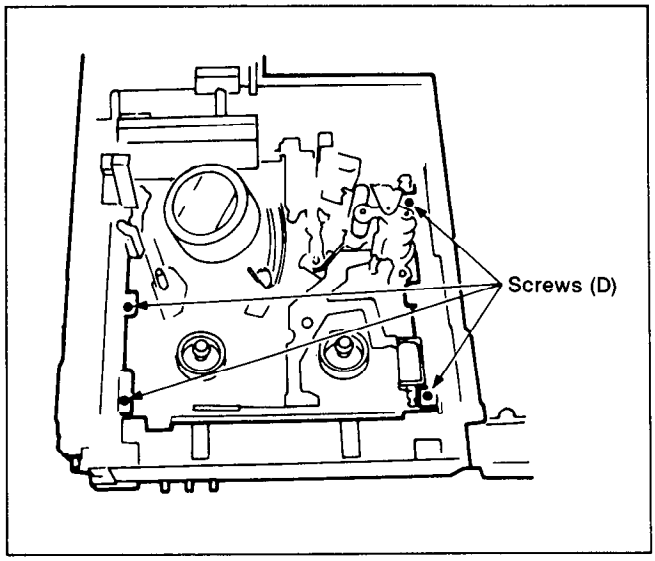


Figure M64

6. Manually move the loading mechanism toward the EJECT position.
7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (In the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base(Figure M65).
8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette Holder should drop into place if the Sub Wiper Arms are portioned as called for in step 7.

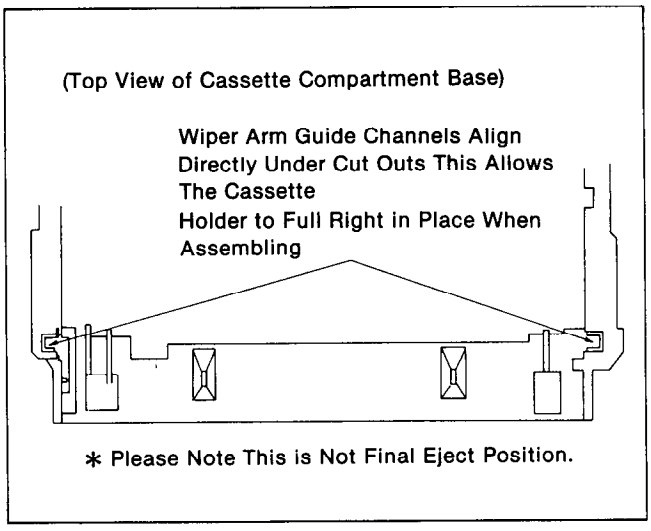

(Top View of Cassette Compartment Base)
Wiper Arm Guide Channels Align
Directly Under Cut Outs This Allows
The Cassette
Holder to Full Right in Place When
Assembling
* Please Note This is Not Final Eject Position.

Figure M65

*Note: For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M66.

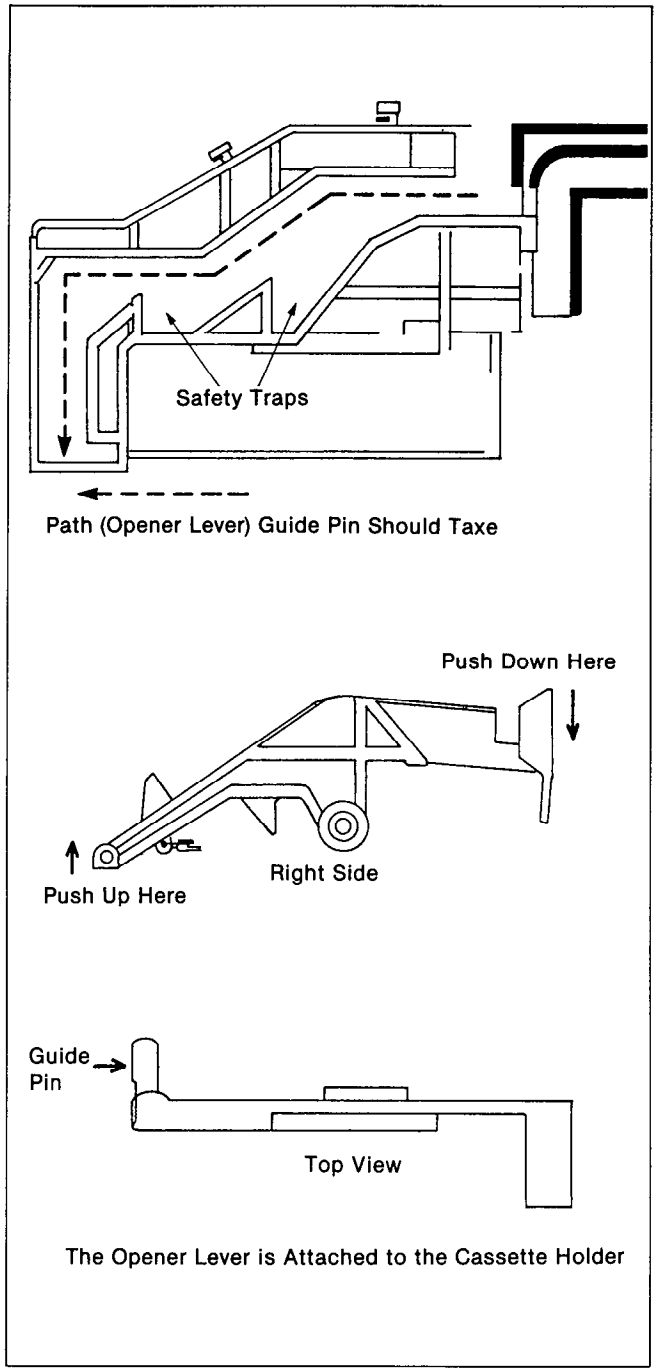


Figure M66 Right Side Plate

9. Install the top plate on the Cassette Compartment Base and tighten the 2 screws (A) as shown in Figure M58.
10. Manually confirm that front loading and main loading run smoothly. Also confirmEJECT before power is applied.

ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette Recorder.

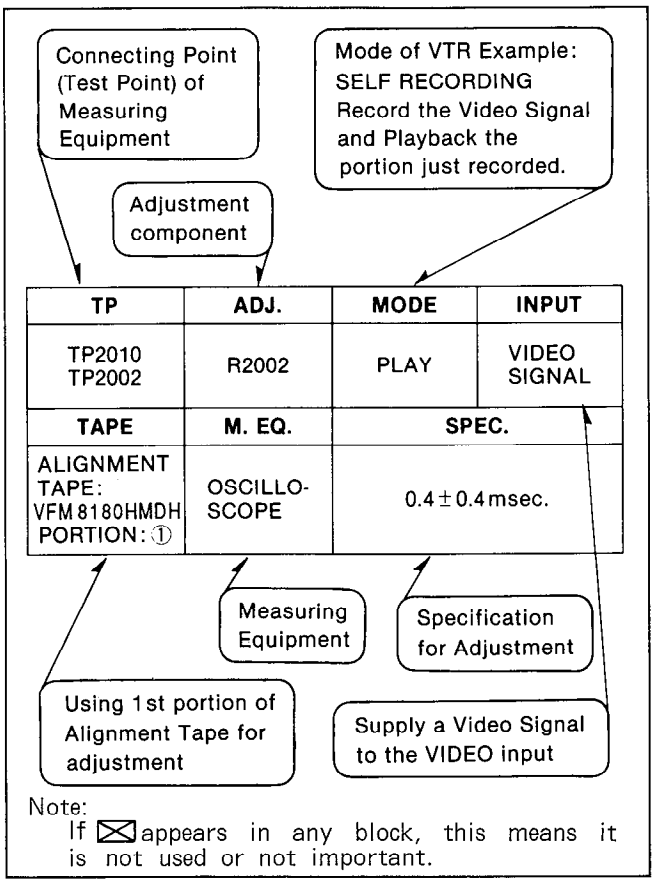
1. TEST & SERVICE EQUIPMENT

To perform the electrical adjustment completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001–50V
2. Dual-Trace Oscilloscope
   Voltage Range: 0.005–50V/div.
   Frequency Range: DC–20MHz
   Probes: 10:1 or 1:1
3. Frequency Counter
   Frequency Range: 0–10MHz
4. Signal Generator (Sine wave)
   Frequency Range: 0–10MHz
5. Video Sweep Generator
   Frequency Range: 0–10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. Spectrum Analyzer
9. Video Signal Generator
10. VHS Alignment Tape (VFM8180HMDH)

2. ADJUSTMENT PROCEDURES

2-1. HOW TO READ THE ADJUSTMENT PROCEDURES



Note:
If ⊠ appears in any block, this means it is not used or not important.

Figure E1

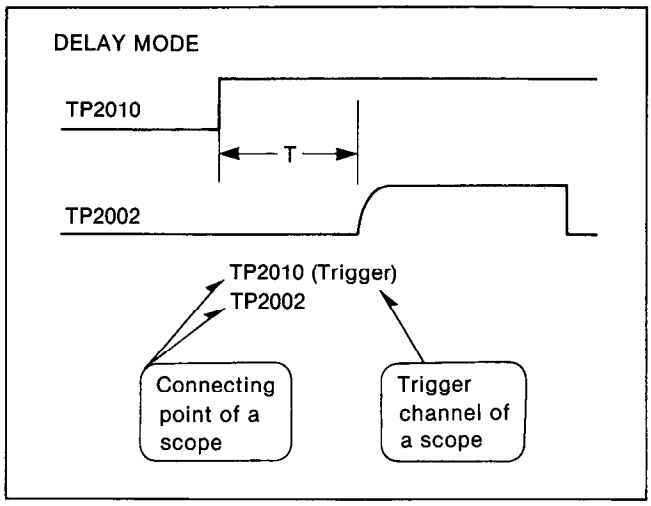


Figure E2

2-2. SERVO SECTION

2-2-1. TRACKING SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2003 (TP6501) TP2004 (TP6503)	VR6502	PLAY	⊠
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION: ②	OSCILLO-SCOPE	T=0.4±0.4msec.	

Note:
This adjustment should be performed only after completion of the tape interchangeability adjustment.

1. Adjust the Tracking VR on the Mode Select C.B.A. to the centre fixed position.

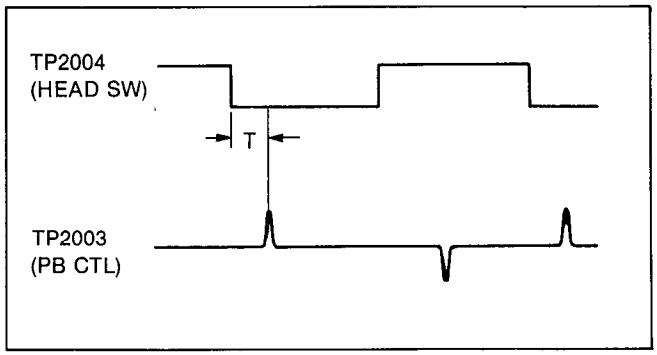


Figure E3

2-2-2. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2004 (TP6503) TP3003	VR2002	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION: ②	OSCILLO-SCOPE	6.5±0.5H	

*Note:
Before this adjustment, Tape interchangeability adjustment should be always completed.

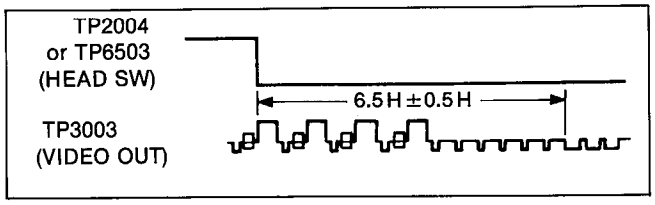


Figure E4

2-3. AUDIO SECTION

2-3-1. AUDIO INPUT PRE-AMP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4005 (NORMAL CH1) TP4006 (NORMAL CH2) TP4307 (Hi-Fi CH1) TP4308 (Hi-Fi CH2)	VR4001 (NORMAL CH1) VR4002 (NORMAL CH2) VR4302 (Hi-Fi CH1) VR4303 (Hi-Fi CH2)	STOP	1kHz, −8dBv AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	V.T.V.M.	−8dBv±0.2dB	

1. Set the Audio Level VRs on the front panel to the centre fixed position and supply an audio signal to the NORM INPUT.

2-3-2. NORMAL AUDIO PLAYBACK FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4005 (CH1) TP4006 (CH2)	VR4005 (CH1) VR4007 (CH2)	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION: ③	OSCILLO-SCOPE	400Hz LEVEL=5kHz LEVEL	

1. Set the Dolby NR switch to off position.

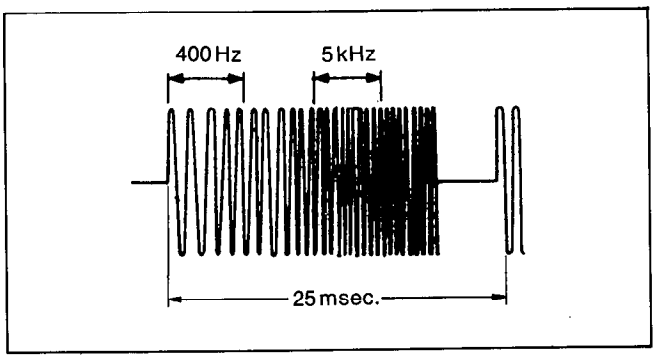


Figure E5

Note:
This adjustment should be always completed prior to Normal Audio playback Gain Adjustment (Item: 2-3-3).

2-3-3. NORMAL AUDIO PLAYBACK GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4005 (CH1) TP4006 (CH2)	VR4004 (CH1) VR4008 (CH2)	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION: ③	V.T.V.M.	$-6^{+0.2}_{-0}$dBv	

2-3-4. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
A/C HEAD	VR4009 (CH1) VR4010 (CH2)	REC PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK	V.T.V.M.	4.0±0.2Vrms	

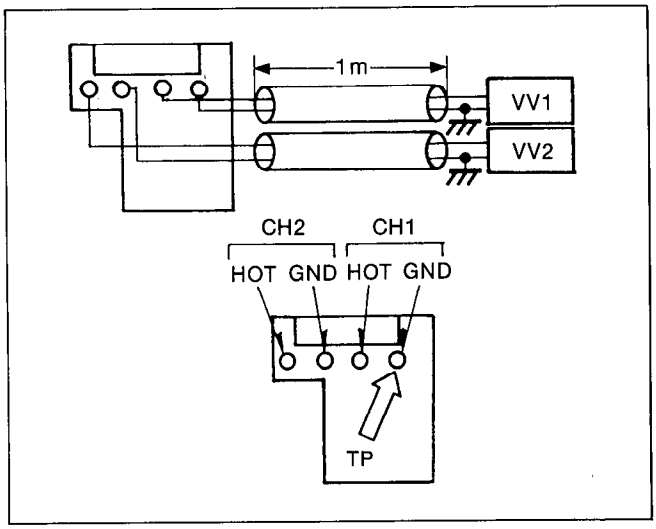


Figure E6

2-3-5. NORMAL AUDIO REC CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4001 TP4005 (CH1) TP4002 TP4006 (CH2)	VR4003 (CH1) VR4006 (CH2)	REC PLAY ↕ PLAY	1kHz, −8dBv AUDIO SIGNAL /Colour Bar Signal
TAPE	**M. EQ.**	**SPEC.**	
BLANK	V.T.V.M.		

1. Supply an audio signal to Audio IN.
2. Supply a video signal to VIDEO IN.
3. Place the deck in REC PLAY mode.
4. Adjust VR4003 so that the V.T.V.M. (2) level becomes 800mVrms then V.T.V.M. (1) level is determine at 0dB.
5. Play back the just recorded portion.
6. Read the deflection of V.T.V.M. (1).
7. Place the deck in REC PLAY mode.
8. Revise the VR4003 to deflection of V.T.V.M. (1) at the V.T.V.M. (2).
9. If the REC PLAY mode does not indicate PLAYBACK mode at V.T.V.M. (1) repeat steps 3 to 8 until the REC PLAY mode and PLAYBACK mode are the same.
10. CH2 adjustment procedures are the same as CH1 except the reference numbers of VR and TP.

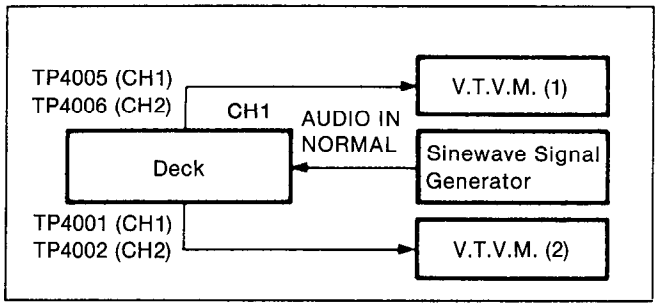


Figure E7

2-3-6. Hi-Fi AUDIO PLAYBACK HEAD SW SHIFT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4303 TP4306	VR4301	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION: ②	OSCILLO- SCOPE		

Note:
Adjust TRACKING VR (VR6501) so that envelope level becomes maximum.

1. Adjust VR4301 so that there is no drop-out portion between CH1 head output and CH2 one.

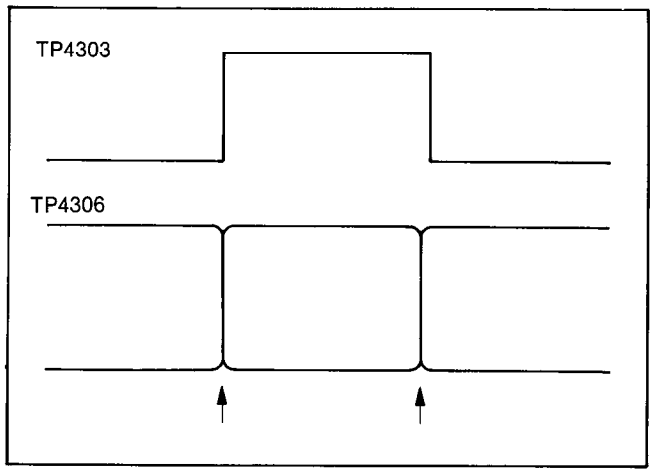


Figure E8

2-3-7. Hi-Fi AUDIO CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4304 (CH1) TP4305 (CH2)	VR4307 (CH1) VR4305 (CH2)	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	1.4MHz±10kHz (CH1) 1.8MHz±10kHz (CH2)	

Note:
If signal level is too low to trigger frequency counter, adjust VR4310(CH1) and VR4308 (CH2) to clockwise.
When VR4310 or VR4308 are turned, "Hi-Fi AUDIO REC CURRENT ADJ." should be

1. Connect the jumper wires between each AUDIO INPUT (Hi-Fi CH1, CH2 and NOR-CH1, CH2) and GND.

2-3-8. Hi-Fi AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4304 (CH1) TP4305 (CH2)	VR4306 (CH1) VR4304 (CH2)	STOP	1kHz, −8dBv AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	SPECTRUM ANALYZER	fw=100kHz±5kHz	

1. Set the Audio Level VRs on the front panel to the center fixed position and supply an audio signal to Hi-Fi Audio Input.
2. Connect the spectrum analyzer to TP4304, and set the center frequency to 1.4MHz.
3. Adjust VR4306 so that the width of the "fw" portion becomes 100KHz +/− 5KHz.
4. Change the probe of spectrum analyzer from TP4304 to TP4305, and set the center frequency of spectrum analyzer to 1.8MHz.
5. Adjust VR4304 so that the width of the "fw" portion becomes 100K+/− 5KHz.

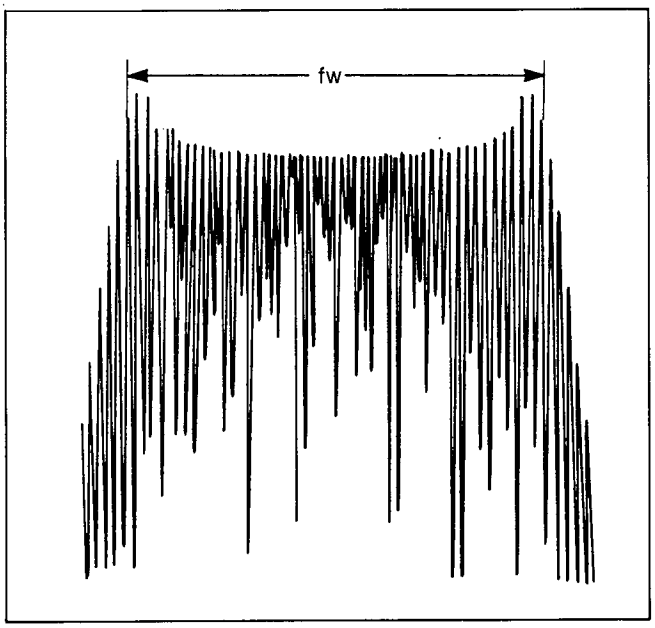


Figure E9

2-3-9. Hi-Fi AUDIO REC CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP5501	VR4310 (CH1) VR4308 (CH2)	REC PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK	OSCILLO-SCOPE	150±5mV (CH1) 650±5mV (CH2)	

1. Turn the Hi-Fi SW on the Mode select C.B.A. to ON position.
2. Connect the jumper wires between Hi-Fi AUDIO IN (CH1, CH2) and GND.
3. Turn VR4308 fully counterclockwise.
4. Adjust VR4310 (CH1) so that the level becomes 150 +/- 5mVp-p.

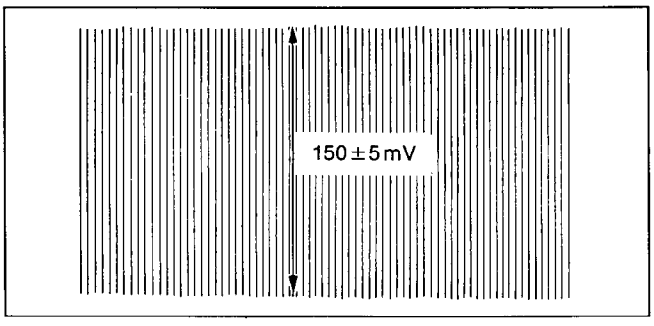


Figure E10

5. Adjust VR4308 (CH2) so that the level becomes 650mV +/- 5mVp-p.

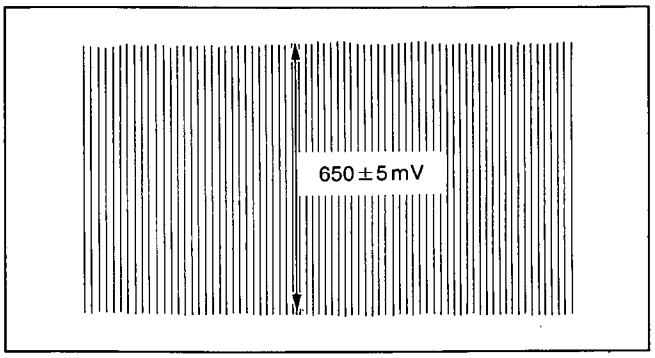


Figure E11

2-3-10. Hi-Fi AUDIO MUTING LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4306 IC4301-㉙	VR4309	SELF RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
VFM8180HMDH PORTION:②	OSCILLO-SCOPE	A=150mVp-p	

1. Adjust the Tracking VR so that the envelope level at TP4306 becomes maximum.
2. Connect the Oscilloscope to pin 29 of IC4301.
3. Adjust VR4309 so that the level of Hi-Fi Audio signal becomes 150mVp-p.

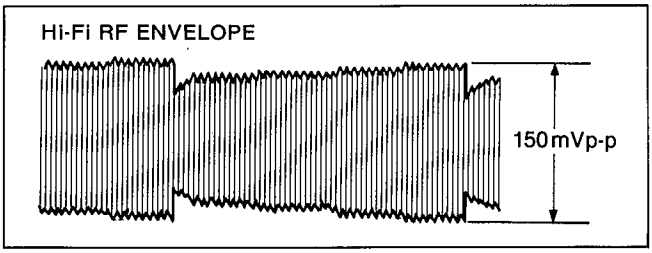


Figure E12

2-4. VIDEO SECTION

2-4-1. AGC LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3003	VR3003	STOP (E-E)	COLOUR BAR SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05Vp-p	

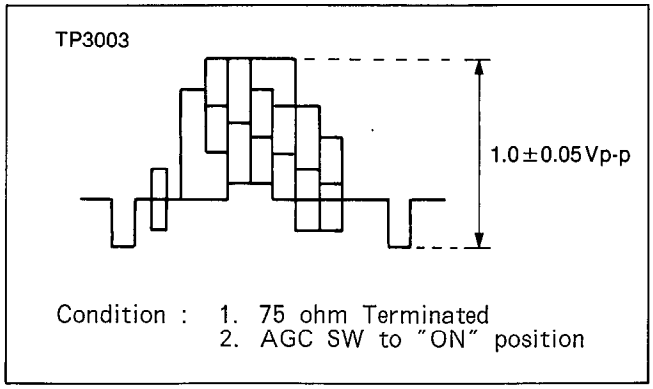


Figure E13

2-4-2. Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3003	VR3005	STOP (E-E)	COLOUR BAR SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05Vp-p	

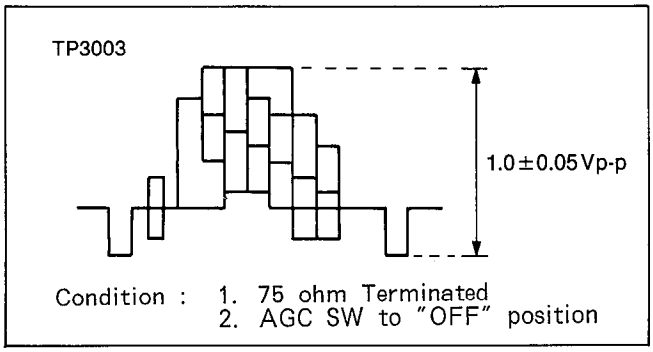


Figure E14

2-4-3. Y NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3001	VR3001	STOP (E-E)	COLOUR BAR SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	LESS THAN 50mVp-p	

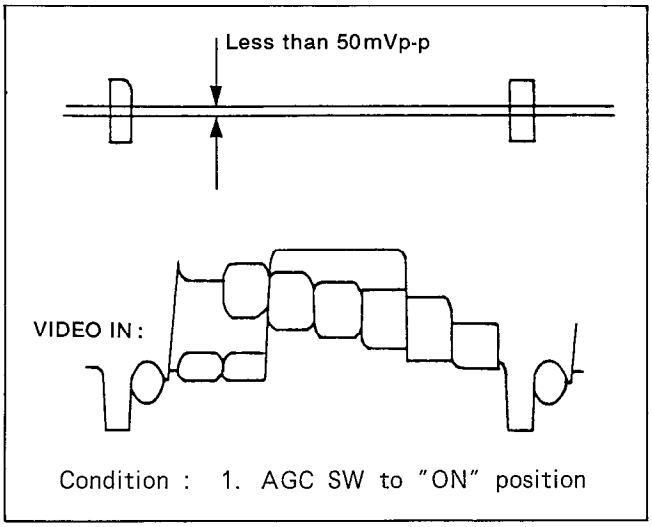


Figure E15

2-4-4. VIDEO REC CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP5502 (HOT) TP5503 (GND)	VR5501 (REC-Y) VR5502 (REC-C)	REC PLAY	COLOUR BAR SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK	OSCILLO-SCOPE	REC-C: 34±2mVp-p REC-Y: 150±5mVp-p	

1. Connect the scope to TP5502 (HOT) and TP5503 (GND).
2. Turn VR5501 to eliminate the Y recording current.
3. Adjust VR5502 so that the cyan level is 34 +/- 2mVp-p.
4. Adjust VR5501 so that the Y recording current at sync tip portion is 150 +/- 5mVp-p.

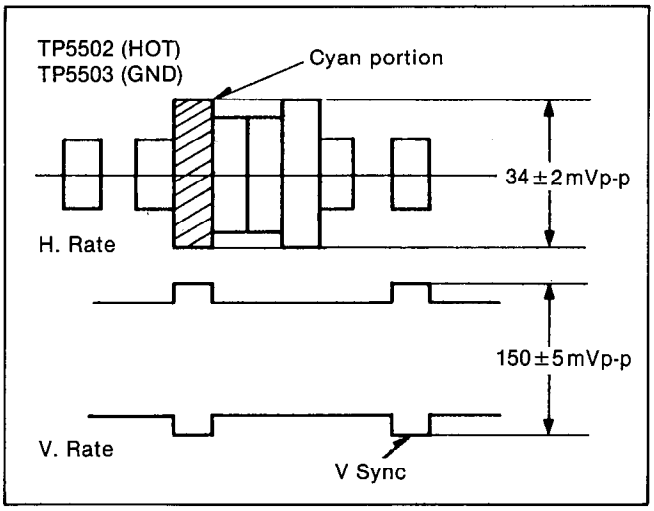


Figure E16

2-4-5. CHROMINANCE RECURSIVE FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3009 (PHASE) VR3010 (GAIN)	SELF RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	LESS THAN 700mVp-p	

1. Supply the colour Bar signal to Line-In.
2. Playback the just recorded portion.
3. Connect the oscilloscope to TP3002.
4. Adjust VR3009 and VR3010 mutually so that the waveform is minimized.

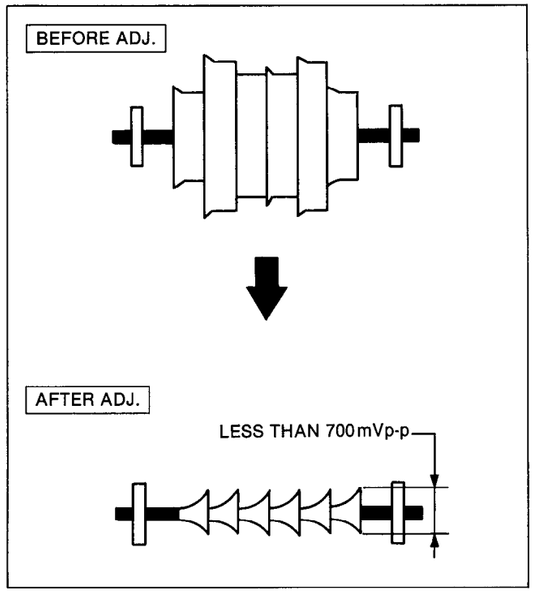


Figure E17

2-4-6. PLAYBACK VIDEO LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT (TP3003)	VR3009 (Y) VR3006 (C)	SELF RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	1.0±0.05Vp-p (Y) 0.63±0.03Vp-p (CYAN)	

1. Supply the colour Bar signal to Video Input.
2. Connect the oscilloscope to TP3003.
3. Playback the just recorded portion.
4. Adjust VR3009 for 1.0 +/- 0.05Vp-p and VR3006 for 0.63 +/- 0.03Vp-p as shown in Figure E18.

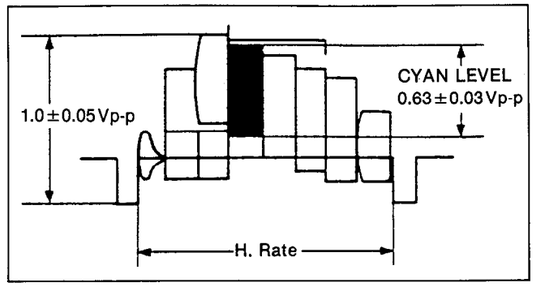
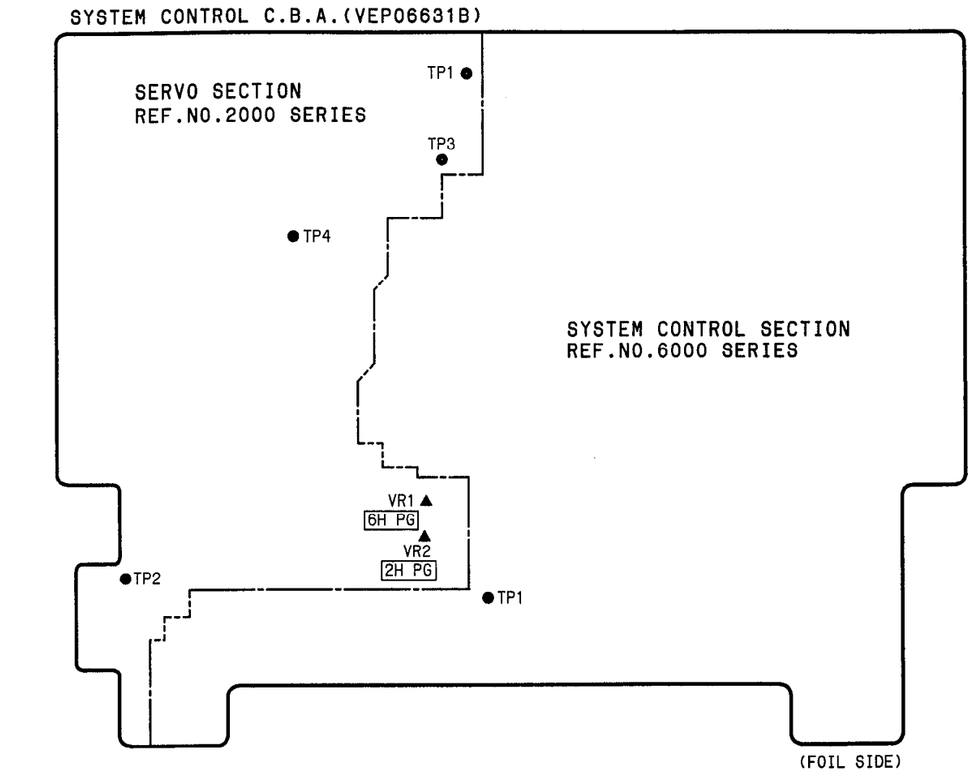
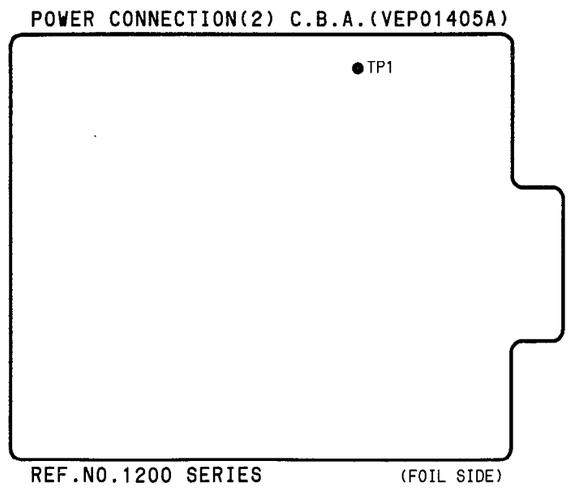
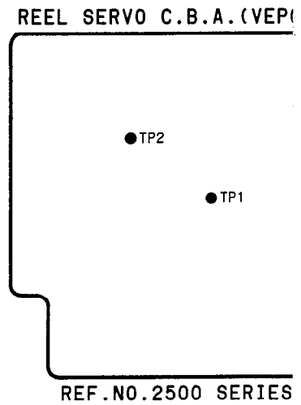


Figure E18

LOCATION OF TEST POINS AND CONTROLS







2-4-5. CHROMINANCE RECURSIVE FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3009 (PHASE) VR3010 (GAIN)	SELF RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	LESS THAN 700mVp-p	

1. Supply the colour Bar signal to Line-In.
2. Playback the just recorded portion.
3. Connect the oscilloscope to TP3002.
4. Adjust VR3009 and VR3010 mutually so that the waveform is minimized.

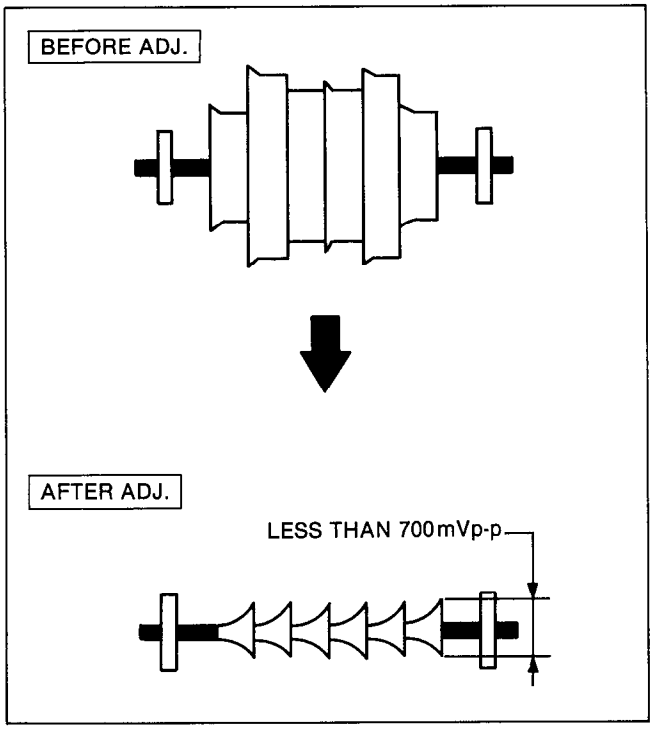


Figure E17

2-4-6. PLAYBACK VIDEO LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT (TP3003)	VR3009 (Y) VR3006 (C)	SELF RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	1.0±0.05Vp-p (Y) 0.63±0.03Vp-p (CYAN)	

1. Supply the colour Bar signal to Video Input.
2. Connect the oscilloscope to TP3003.
3. Playback the just recorded portion.
4. Adjust VR3009 for 1.0 +/- 0.05Vp-p and VR3006 for 0.63 +/- 0.03Vp-p as shown in Figure E18.

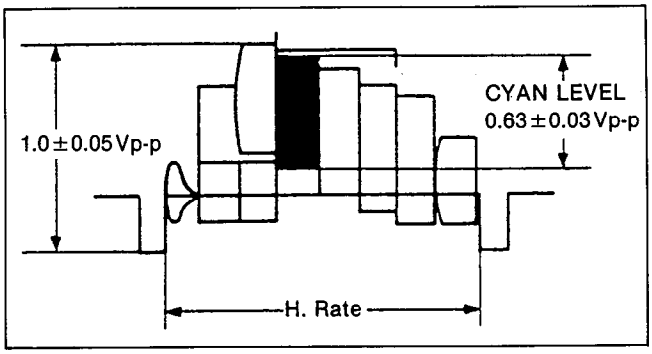
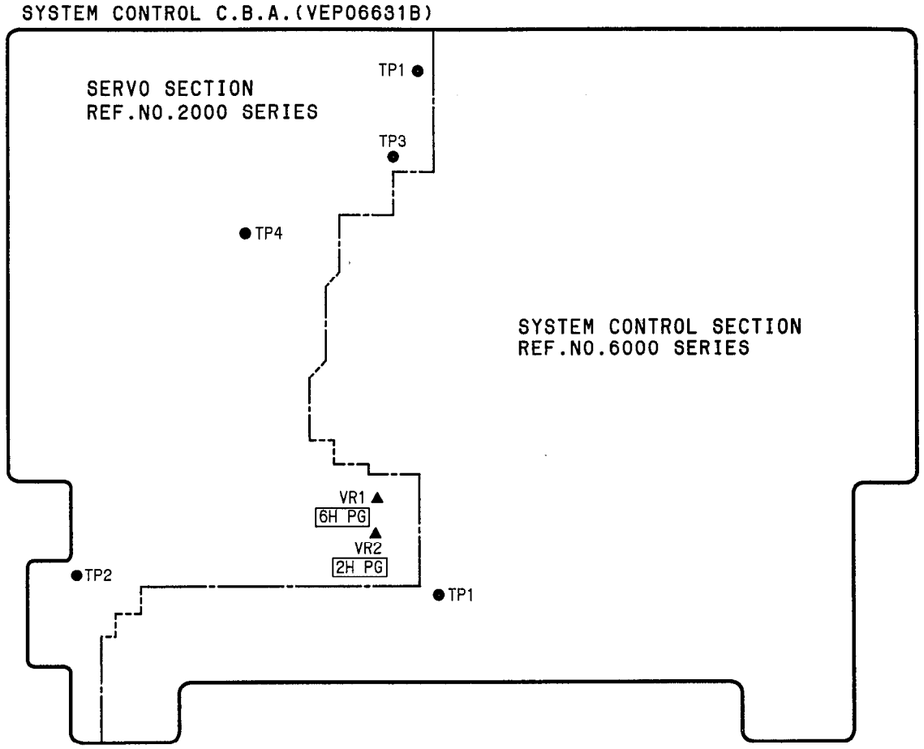


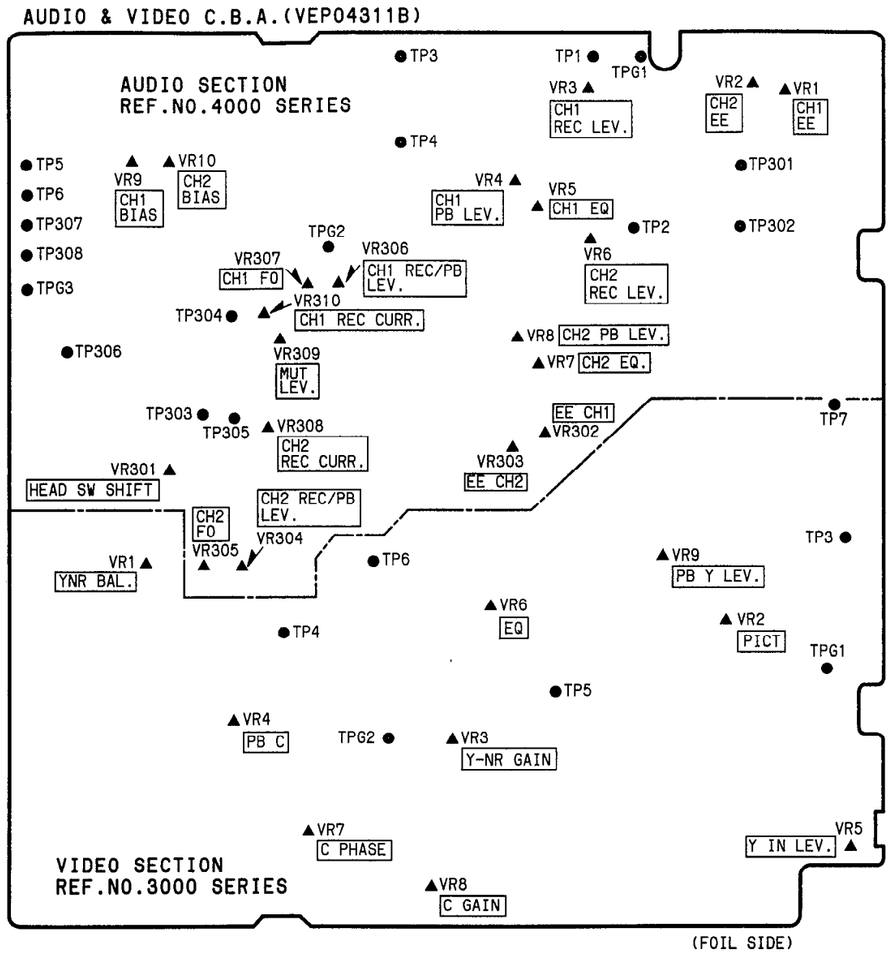
Figure E18

LOCATION OF TEST POINS AND CONTROLS

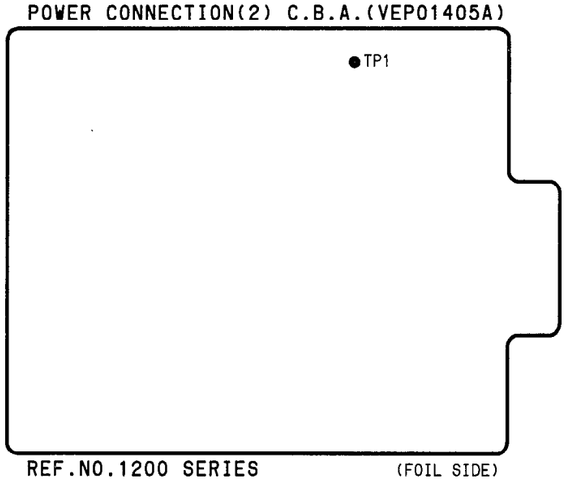
SYSTEM CONTROL C.B.A.(VEP06631B)



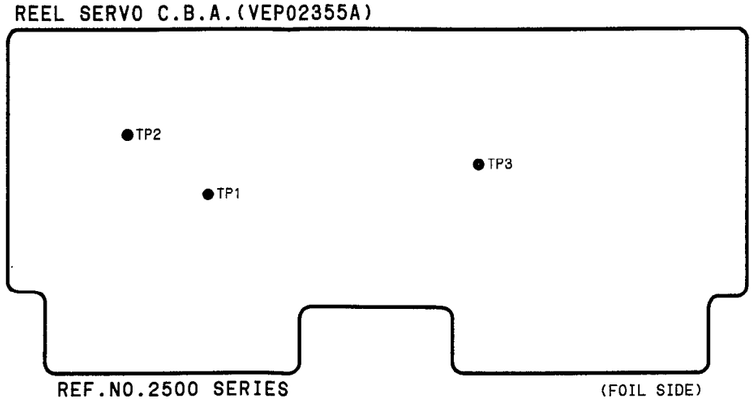
AUDIO & VIDEO C.B.A.(VEP04311B)



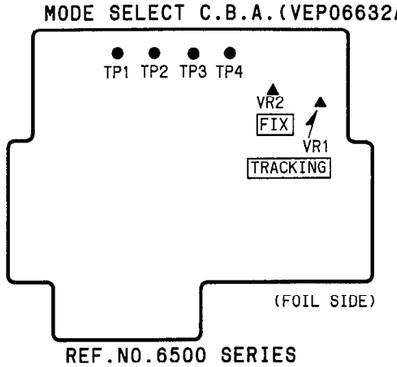
POWER CONNECTION(2) C.B.A.(VEP01405A)



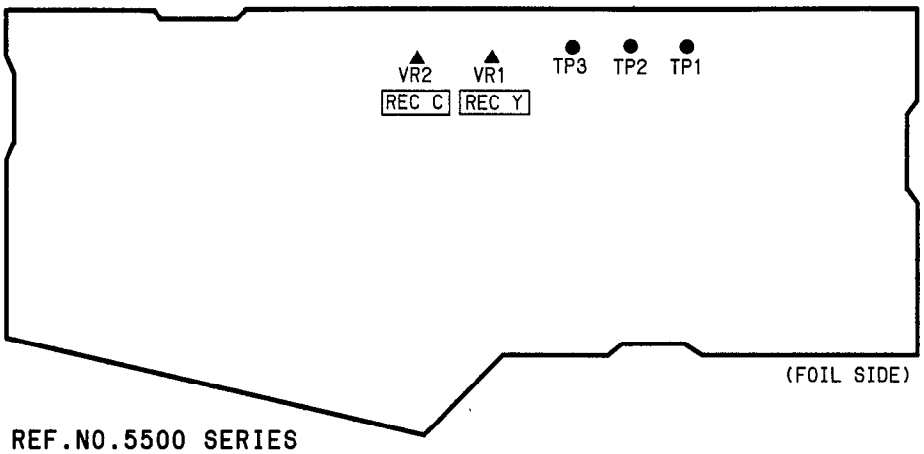
REEL SERVO C.B.A.(VEP02355A)



MODE SELECT C.B.A.(VEP06632A)

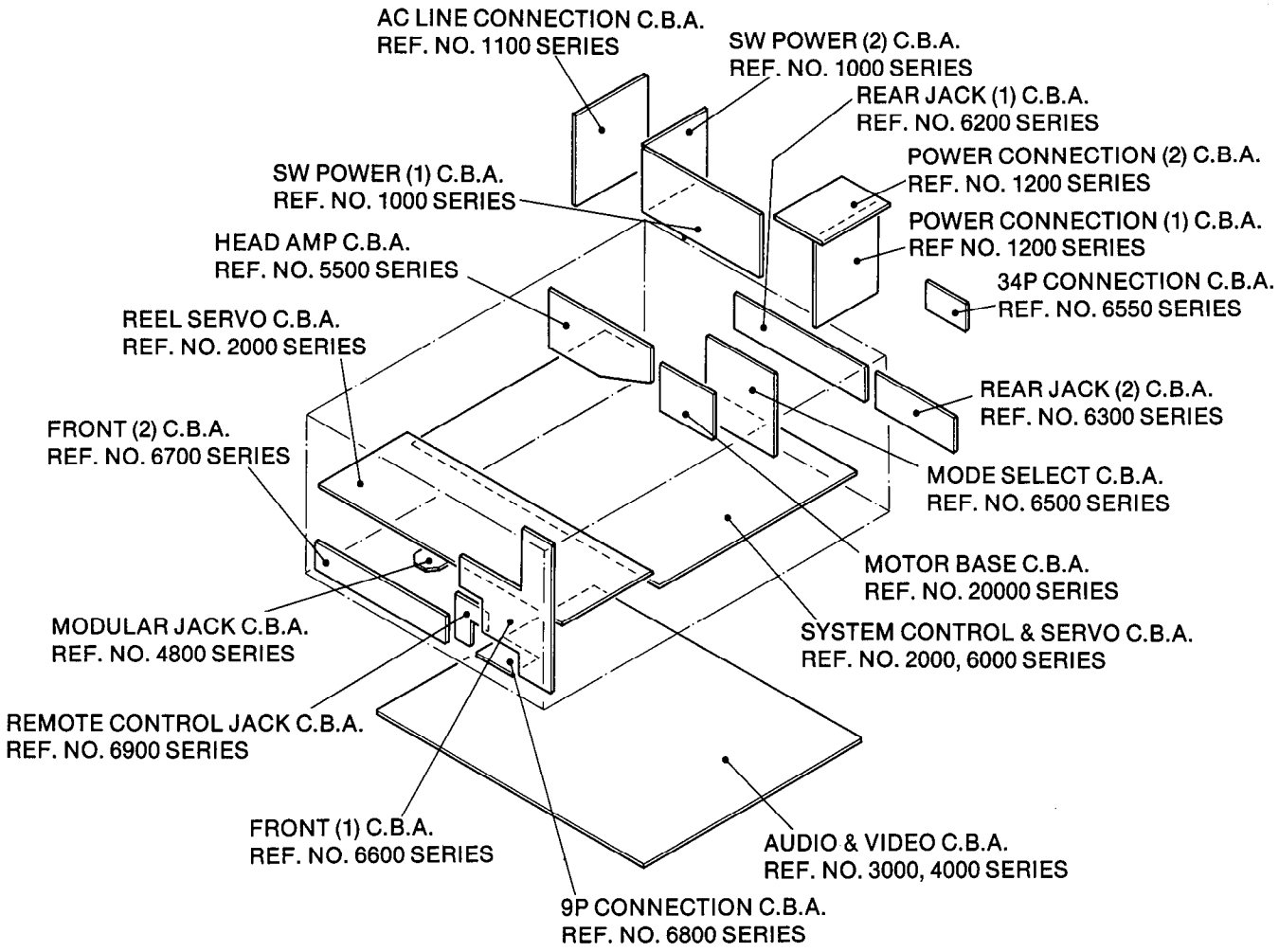


HEAD AMP C.B.A.(VEP05151C)

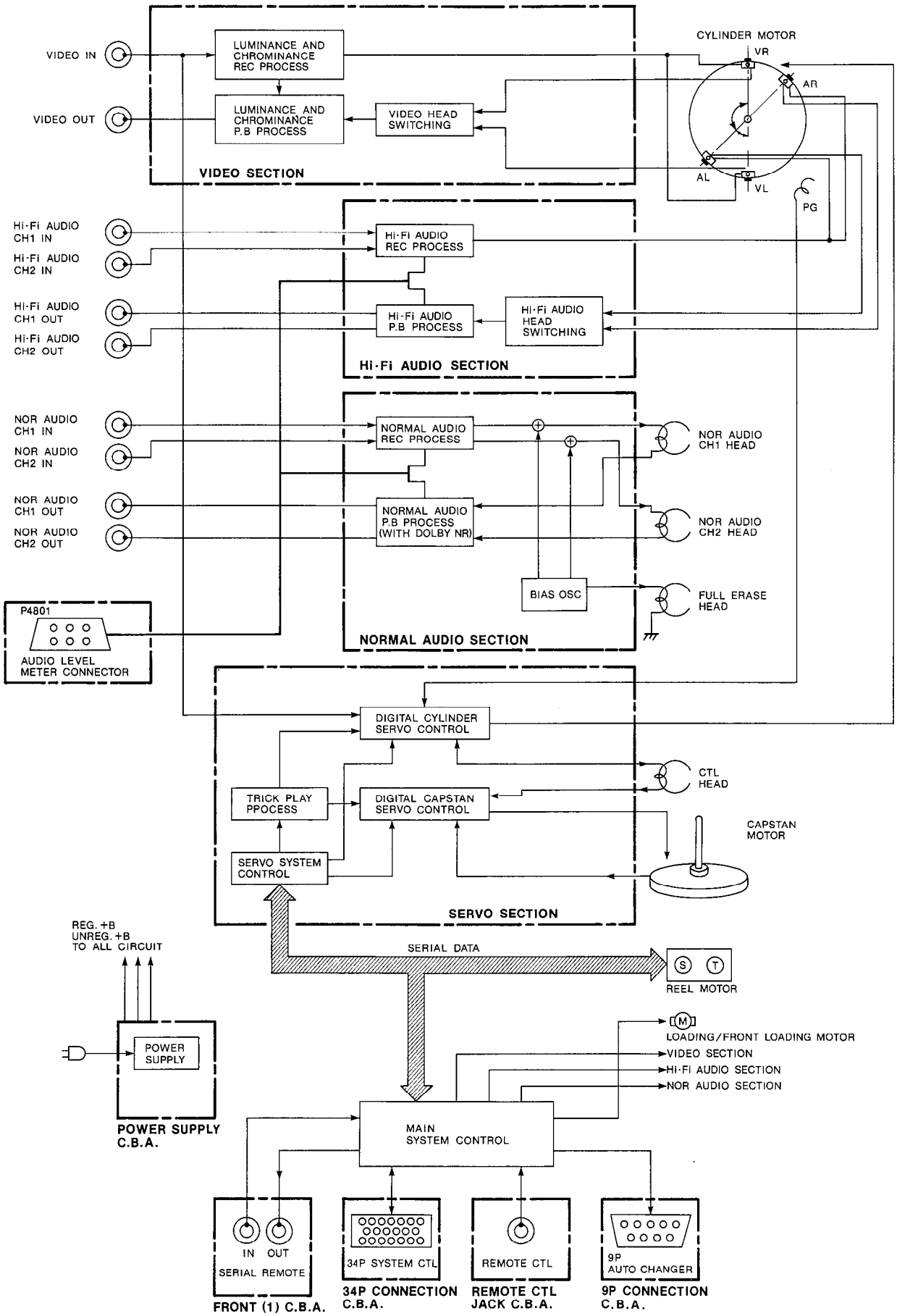


REF.NO.5500 SERIES

CIRCUIT BOARD LAYOUT



OVERALL BLOCK DIAGRAM



SYSTEM CONTROL BLOCK DIAGRAM

IC6001

PIN	PORT	I/O	FUNCTION	ACTIVE	ACTIVE	FUNCTION	I/O	PORT	PIN
1	P65	I	FF SW	L	---	SERVO SERIAL DATA	O	SBO 0	50
2	P64	I	REW SW	L	H	CYLINDER ON	O	P97	52
3	P63	I	PLAY SW	L	H	TAPE END/BEG DETECT	O	P96	53
4	P62	I	REC SW	L	H	CAPSTAN ON	O	P95	54
5	P61	I	PAUSE SW	L	---	SENSOR LED	O	P94	55
6	P60	I	FRONT EJECT SW	L	H	BRAKE SOLENOID "ON"	O	P93	56
7	P57	I	ANALOG REMOTE	H	H	LOADING SPEED DOWN (LOADING/UNLOADING)	O	P92	57
8	P56	I	NO VIDEO (AUTO OFF INPUT)	H	H	LOAD	O	P91	58
9	P55	I	QC NG	L	H	LOADING MOTOR ON	O	P90	59
10	P54	O	QC CHECK	H	L	POSITION SW (PLAY)	I	P87/AD7	63
11	P53	O	FORCE ID CODE IN	H	L	POSITION SW (STOP 2)	I	P87/AD6	64
12	P52	O	AGC ON	H	L	POSITION SW (STOP)	I	P85/AD5	65
13	P51	O	SLP ON	H	L	POSITION SW (EJECT)	I	P84/AD4	66
14	P50	O	DOLBY ON	H	L	CASSETTE SW	I	P83/AD3	67
16	$\overline{RST}$	I	RESET	L	---	REMOTE DATA IN	I	P82/AD2	68
17	P47	O	LIMIT ON	H	L	S-PHOTO SENSOR IN	I	P81/AD1	69
18	P46	O	HI-FI ON	H	L	T-PHOTO SENSOR IN	I	P80/AD0	70
19	P45	O	STOP HOLD	H	+5V	+5V	—	Vref	71
20	P44	O	REC LED	H	+5V	+5V	—	AVDD	72
21	P43	O	PAUSE LED	H	+5V	+5V	—	VDD	73
22	P42	O	PLAY LED	H	H	STAND-BY(During EJECT, STOP, REC, REC PAUSE)	O	P77	74
23	P41	O	REW LED	H	H	CHANGER START	O	P76	75
24	P40	O	FF LED	H	H	CASSETTE OUT	O	P75	76
25	IRQ2/P26	I	T-REEL PULSE	---	H	CASSETTE IN	O	P74	77
26	IRQ1/P25	I	SERIAL REMOTE IN	DC	H	AUTO OFF	O	P73	78
27	IRQ0/P24	I	HEAD SW PULSE	---	H	TAPE RUN	O	P72	79
28	TC104/P22	I	NOT USED	—	H	REC	O	P71	80
29	TC102/P21	I	TENSION NG	H	H	AUTO OFF/EJECT	O	P70	81
30	TC101/P20	I	NOT USED	H	L	STOP SW	I	P67	83
31	OSC2	I/O	OSC	---	L	EJECT SW	I	P66	84
32	OSC1	I/O	OSC	---					
36	P17	O	EXCEPT VIDEO REC MODE	L					
37	P16	O	VIDEO EE MODE	H					
38	P15	O	PLAY	H					
39	P14	O	STILL	H					
40	P13	O	AUDIO EE	L					
41	P12	O	AUDIO/VIDEO DELAY REC	L					
42	P11	O	NORMAL AUDIO MUTE	H					
43	P10	O	HI-FI AUDIO MUTE	H					
44	P33/SDO3	O	SCAN 1	---					
45	P32/SDO2	O	SCAN 2	---					
46	P31/SDO1	O	SCAN 0	---					
47	P30/SDO0	O	SERIAL REMOTE OUT	---					
48	SBT 0	O	SERVO SERIAL CLK	---					
49	SBI 0	I	SCAN DATA	---					

GRAM

IC6001

PIN	PORT	I/O	FUNCTION	ACTIVE	ACTIVE	FUNCTION	I/O	PORT	PIN
1	P65	I	FF SW	L	---	SERVO SERIAL DATA	O	SBO 0	50
2	P64	I	REW SW	L	H	CYLINDER ON	O	P97	52
3	P63	I	PLAY SW	L	H	TAPE END/BEG DETECT	O	P96	53
1	P62	I	REC SW	L	H	CAPSTAN ON	O	P95	54
5	P61	I	PAUSE SW	L	---	SENSOR LED	O	P94	55
6	P60	I	FRONT EJECT SW	L	H	BRAKE SOLENOID "ON"	O	P93	56
7	P57	I	ANALOG REMOTE	H	H	LOADING SPEED DOWN (LOADING/UNLOADING)	O	P92	57
8	P56	I	NO VIDEO (AUTO OFF INPUT)	H	H	LOAD	O	P91	58
9	P55	I	QC NG	L	H	LOADING MOTOR ON	O	P90	59
10	P54	O	QC CHECK	H	L	POSITION SW (PLAY)	I	P87/AD7	63
11	P53	O	FORCE ID CODE IN	H	L	POSITION SW (STOP 2)	I	P87/AD6	64
12	P52	O	AGC ON	H	L	POSITION SW (STOP)	I	P85/AD5	65
13	P51	O	SLP ON	H	L	POSITION SW (EJECT)	I	P84/AD4	66
14	P50	O	DOLBY ON	H	L	CASSETTE SW	I	P83/AD3	67
16	$\overline{RST}$	I	RESET	L	---	REMOTE DATA IN	I	P82/AD2	68
17	P47	O	LIMIT ON	H	L	S-PHOTO SENSOR IN	I	P81/AD1	69
18	P46	O	HI-FI ON	H	L	T-PHOTO SENSOR IN	I	P80/AD0	70
19	P45	O	STOP HOLD	H	+5V	+5V	—	Vref	71
20	P44	O	REC LED	H	+5V	+5V	—	AVDD	72
21	P43	O	PAUSE LED	H	+5V	+5V	—	VDD	73
22	P42	O	PLAY LED	H	H	STAND-BY(During EJECT, STOP, REC, REC PAUSE)	O	P77	74
23	P41	O	REW LED	H	H	CHANGER START	O	P76	75
24	P40	O	FF LED	H	H	CASSETTE OUT	O	P75	76
25	IRQ2/P26	I	T-REEL PULSE	---	H	CASSETTE IN	O	P74	77
26	IRQ1/P25	I	SERIAL REMOTE IN	DC	H	AUTO OFF	O	P73	78
27	IRQ0/P24	I	HEAD SW PULSE	---	H	TAPE RUN	O	P72	79
28	TC104/P22	I	NOT USED	—	H	REC	O	P71	80
29	TC102/P21	I	TENSION NG	H	H	AUTO OFF/EJECT	O	P70	81
30	TC101/P20	I	NOT USED	H	L	STOP SW	I	P67	83
31	OSC2	I/O	OSC	---	L	EJECT SW	I	P66	84
32	OSC1	I/O	OSC	---					
36	P17	O	EXCEPT VIDEO REC MODE	L					
37	P16	O	VIDEO EE MODE	H					
38	P15	O	PLAY	H					
39	P14	O	STILL	H					
40	P13	O	AUDIO EE	L					
41	P12	O	AUDIO/VIDEO DELAY REC	L					
42	P11	O	NORMAL AUDIO MUTE	H					
43	P10	O	HI-FI AUDIO MUTE	H					
44	P33/SDO3	O	SCAN 1	---					
45	P32/SDO2	O	SCAN 2	---					
46	P31/SDO1	O	SCAN 0	---					
47	P30/SDO0	O	SERIAL REMOTE OUT	---					
48	SBT 0	O	SERVO SERIAL CLK	---					
49	SBI 0	I	SCAN DATA	---					

MODE	VOLTAGE
STOP	1.02~1.05
REW	1.24~1.29
FF	1.64~1.72
PAUSE/STILL	2.12~2.23
REC	3.54~3.62
PLAY	3.79~3.85

MODE \ PIN	⑧	⑥	⑤	⑩	③
FRONT LOAD	H	H	H	L	10V
FRONT UNLOAD	H	L	H	10V	L
TAPE LOAD	L	H	H	L	8V
TAPE UNLOAD	L	L	H	8V	L
STOP	L	L	L	L	L

CONDITION \ PERIOD	A	B	C	D	E	F
SHORT FF SW "ON"	L	H	H	H	H	H
CAS IN REW SW "ON"	H	L	H	H	H	H
CHANGER START SW"ON"	H	H	L	H	H	H
DIRECT SW "ON"	H	H	H	L	H	H
REC AUTO OFF SW "ON"	H	H	H	H	H	H
SERIAL OUT "ON"	H	H	H	H	H	L

DATA CODE CHART

	D0	D1	D2	D3	D4	D5	D6
STOP	1	1	0	0	0	0	0
PLAY	0	0	1	1	0	0	0
REC/PLAY	0	0	1	1	0	1	1
PAUSE	1	0	1	1	0	0	0
F.F	0	1	1	0	0	0	0
REW	1	1	1	0	0	0	0
EJECT	1	0	0	0	1	0	0
REC PAUSE	1	0	1	1	0	1	1
AGC ON	1	0	1	0	1	0	0
AGC OFF	0	1	0	1	1	0	0
LIMIT ON	0	1	1	0	1	0	0
LIMIT OFF	1	1	0	1	1	0	0
HI-FI ON	1	1	1	0	1	0	0
HI-FI OFF	0	0	1	1	1	0	0
DOLBY ON	0	0	0	1	1	0	0
DOLBY OFF	1	0	1	1	1	0	0
START	1	1	0	0	1	0	0

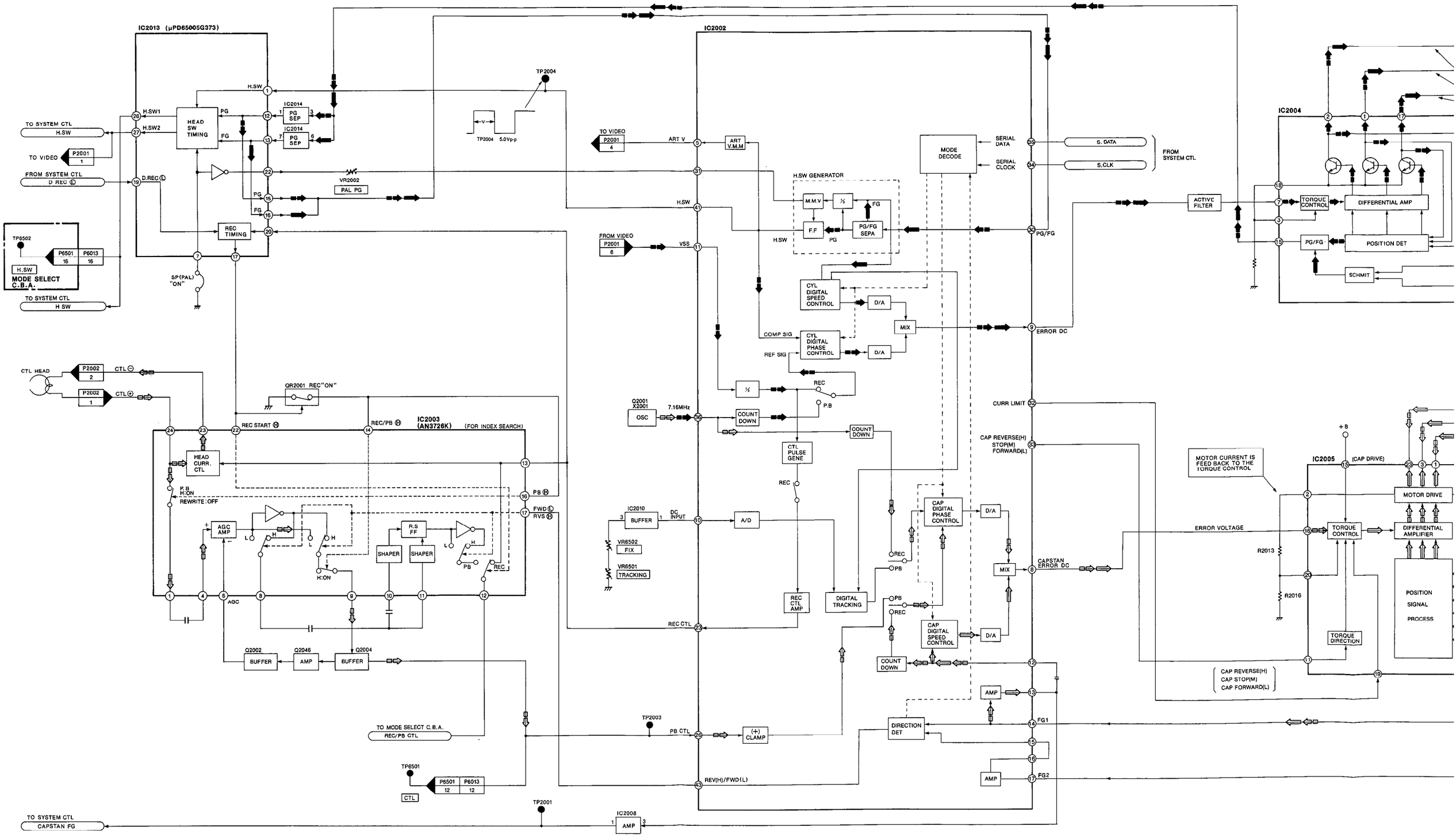
SERVO BLOCK DIAGRAM

CYLINDER SERVO SPEED LOOP

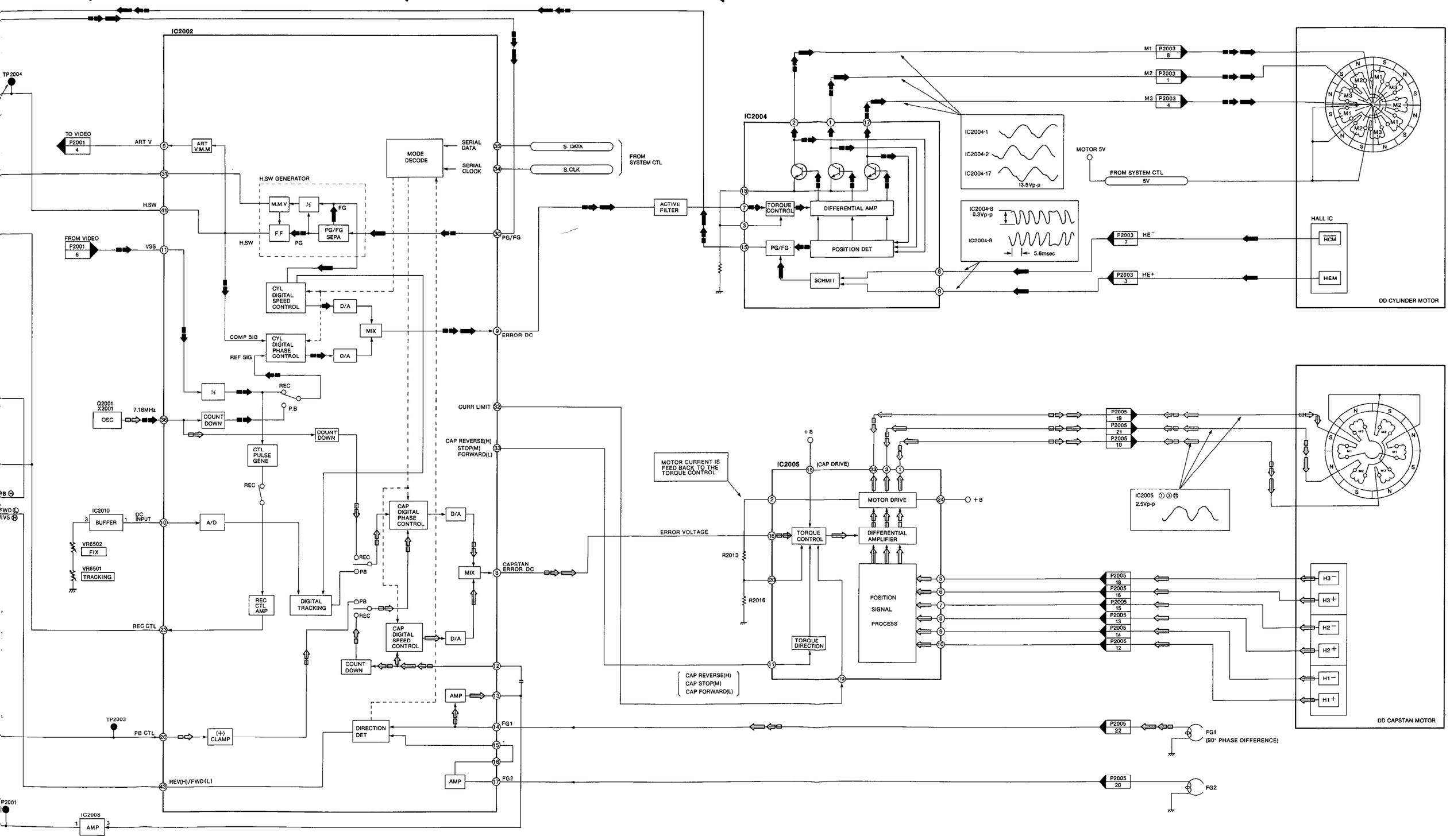
CYLINDER SERVO PHASE LOOP

CAPSTAN SERVO SPEED LOOP

CAPSTAN SERVO PHA



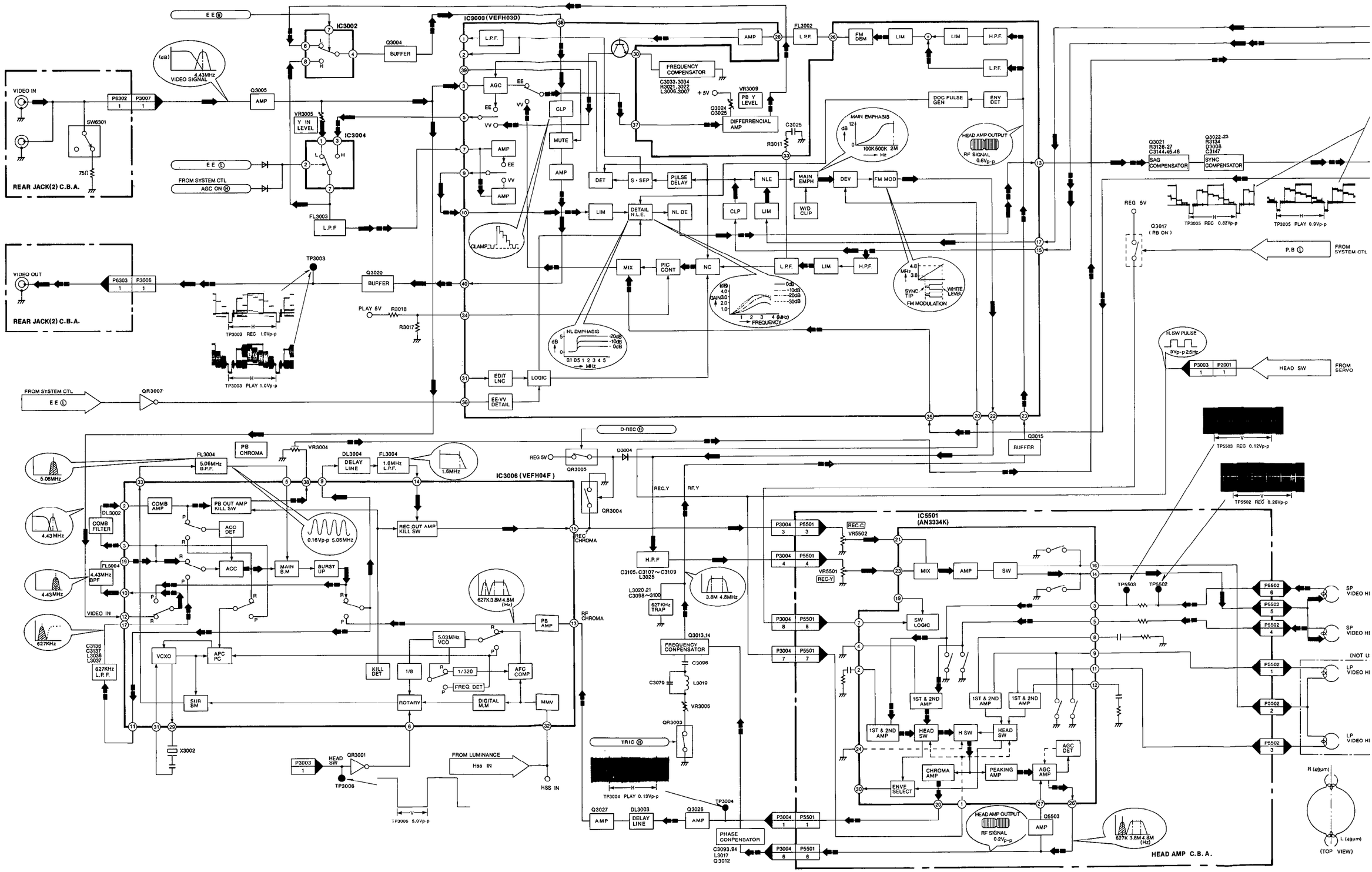
LOOP　CYLINDER SERVO PHASE LOOP　CAPSTAN SERVO SPEED LOOP　CAPSTAN SERVO PHASE LOOP



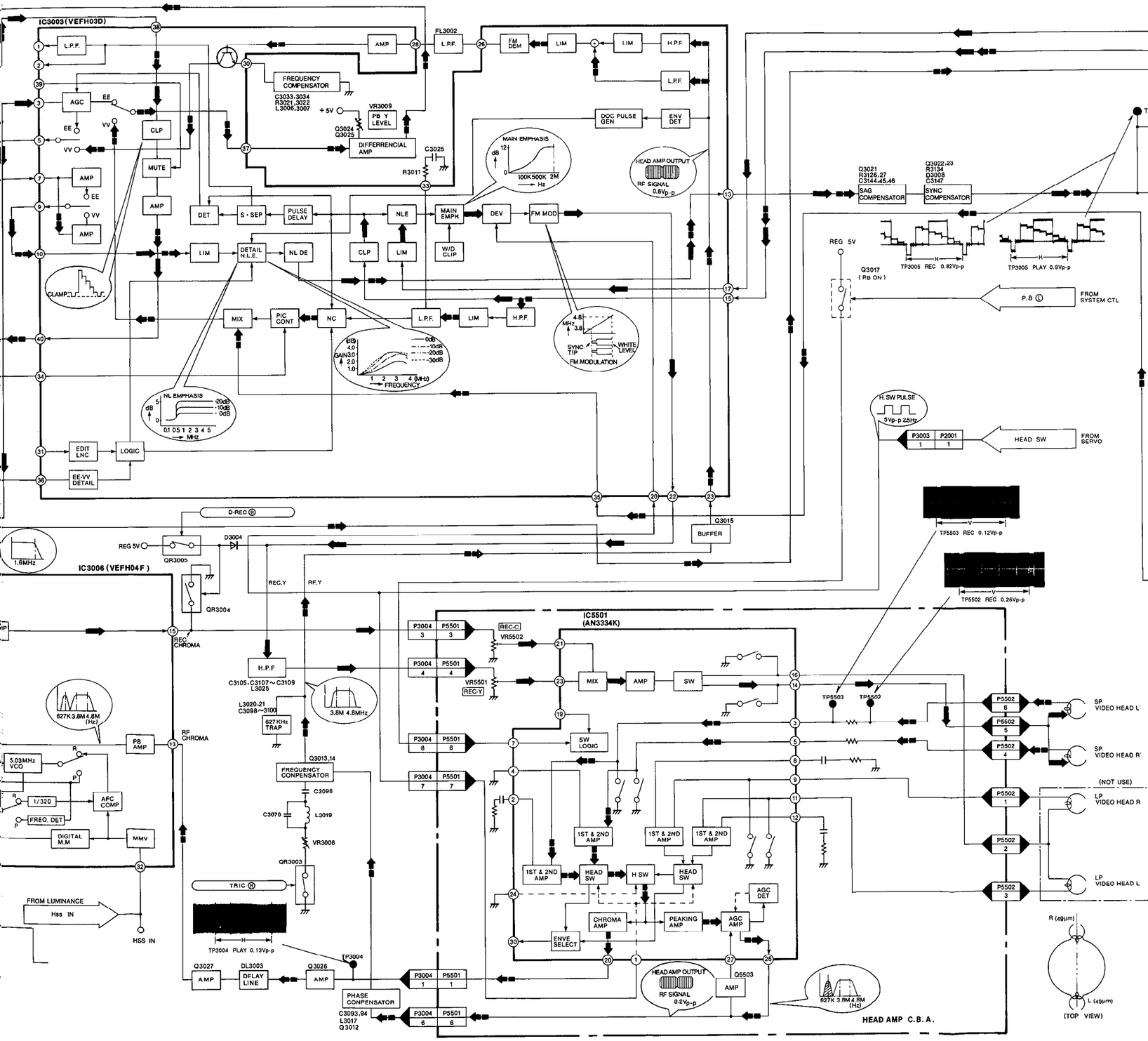
VIDEO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE



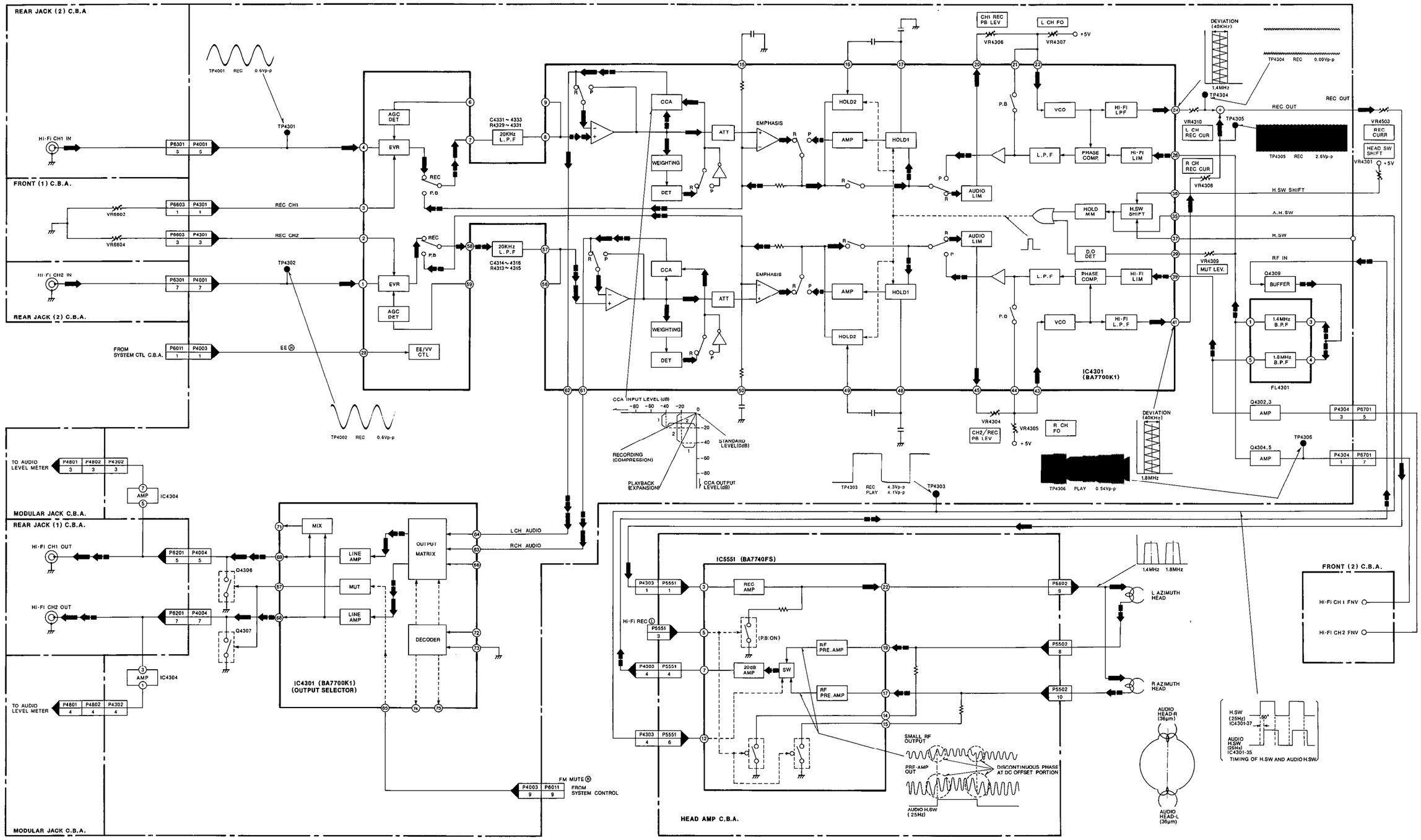
AIN SIGNAL PATH IN REC MODE ◀■■ MAIN SIGNAL PATH IN PLAYBACK MODE



Hi-Fi AUDIO BLOCK DIAGRAM

Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE

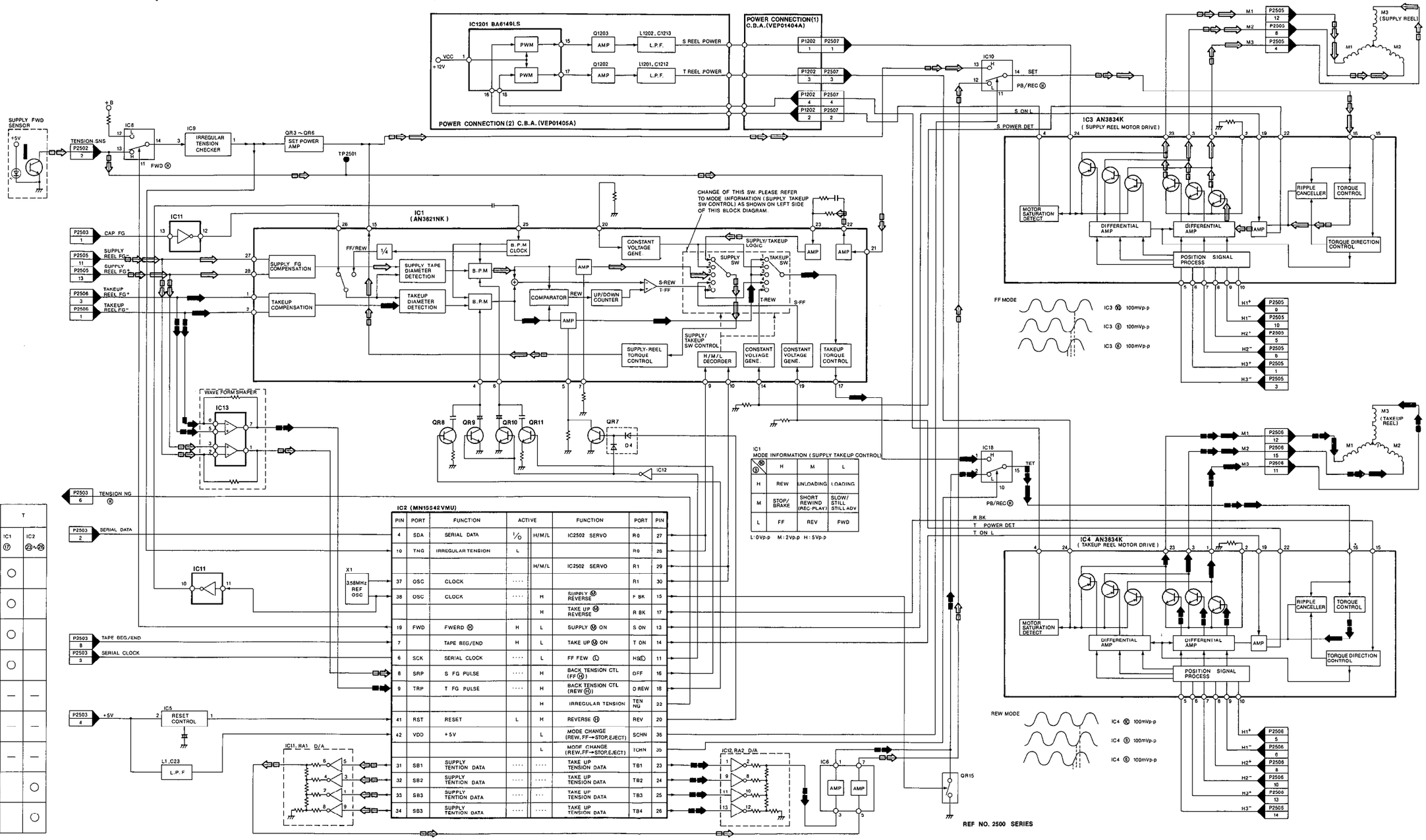
Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



REEL SERVO BLOCK DIAGRAM

SUPPLY REEL DRIVE

TAKEUP REEL DRIVE



REEL DRIVE (S-FF, T-FF)

	S			T	
	IC7 ⑭	IC1 ⑮	IC2 ㉛→㉔	IC1 ⑰	IC2 ㉓→㉖
FWD		○		○	
REV	○			○	
F.F		○		○	
REW		○		○	
S.L.LOADING R.LOADING		○		—	—
UNLOADING		○		—	—
SUB UNLOADING			○	—	—
REW→STOP F.F→STOP			○		○
DURING MECH. SHOCK			○		○

IC2 (MN15542VMU)

PIN	PORT	FUNCTION	ACTIVE		FUNCTION	PORT	PIN
4	SDA	SERIAL DATA	I/O	H/M/L	IC2502 SERVO	R0	27
10	TNG	IRREGULAR TENSION	L			R0	28
				H/M/L	IC2502 SERVO	R1	29
37	OSC	CLOCK	····			R1	30
38	OSC	CLOCK	····	H	SUPPLY Ⓜ REVERSE	F BK	15
				H	TAKE UP Ⓜ REVERSE	R BK	17
19	FWD	FWERD Ⓜ	H	L	SUPPLY Ⓜ ON	S ON	13
7		TAPE BEG/END	H	L	TAKE UP Ⓜ ON	T ON	14
6	SCK	SERIAL CLOCK	····	L	FF FEW Ⓛ	HSD	11
8	SRP	S FG PULSE	····	H	BACK TENSION CTL (FF Ⓗ)	DFF	16
9	TRP	T FG PULSE	····	H	BACK TENSION CTL (REW Ⓗ)	DREW	18
				H	IRREGULAR TENSION	TEN NG	32
41	RST	RESET	L	H	REVERSE Ⓡ	REV	20
42	VDD	+5V		L	MODE CHANGE (REW, FF→STOP, EJECT)	SCHN	36
				L	MODE CHANGE (REW, FF→STOP, EJECT)	TCHN	35
31	SB1	SUPPLY TENTION DATA	····	····	TAKE UP TENSION DATA	TB1	23
32	SB2	SUPPLY TENTION DATA	····	····	TAKE UP TENSION DATA	TB2	24
33	SB3	SUPPLY TENTION DATA	····	····	TAKE UP TENSION DATA	TB3	25
34	SB3	SUPPLY TENTION DATA	····	····	TAKE UP TENSION DATA	TB4	26

IC1 MODE INFORMATION (SUPPLY TAKEUP CONTROL)

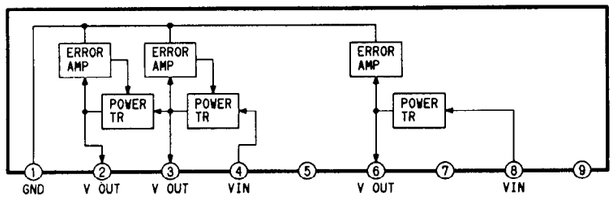
Ⓜ \ Ⓢ	H	M	L
H	REW	UNLOADING	LOADING
M	STOP/ BRAKE	SHORT REWIND (REC-PLAY)	SLOW/ STILL STILL ADV
L	FF	REV	FWD

L : 0Vp-p M : 2Vp-p H : 5Vp-p

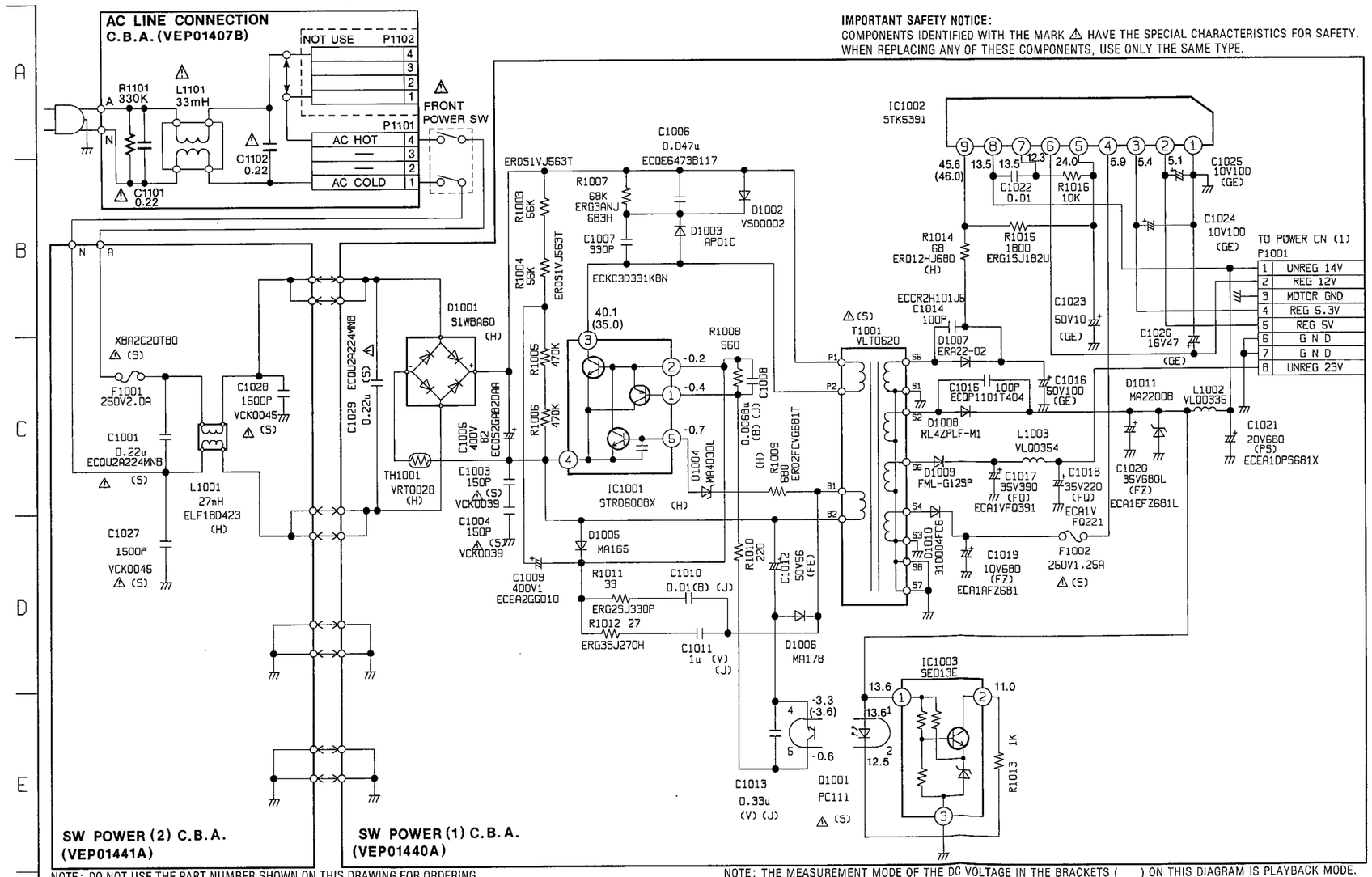
SW POWER (1), SW POWER (2) AND AC LINE CONNECTION SCHEMATIC DIAGRAM

IC INFORMATION

IC1002 STK5391



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

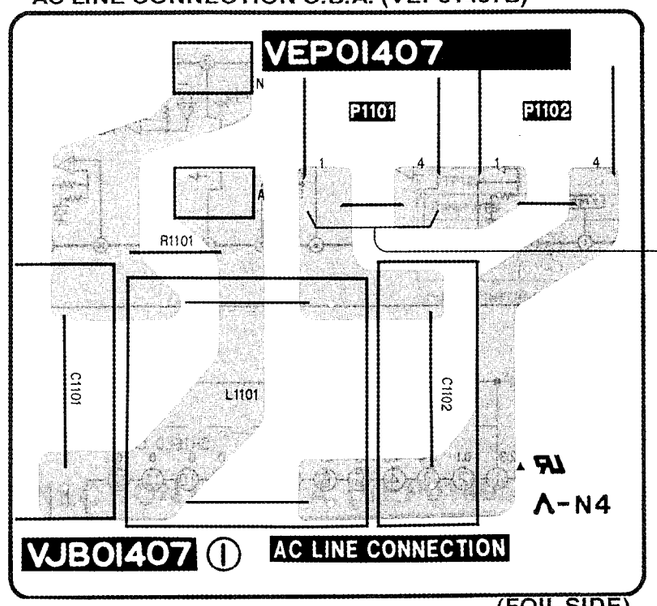
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MEASUREMENT SIGNAL...PAL COLOUR SIGNAL.

SW POWER (1) C.B.A. (VEP01440A), SW POWER (2) C.B.A. (VEP01441A) AND AC LINE CONNECTION C.B.A. (VEP01407B)

SW POWER (1) C.B.A., SW POWER (2) C.B.A. AND AC LINE CONNECTION C.B.A.	
Transistor	
Q1001	B-3
Integrated Circuits	
IC1001	B-3
IC1002	A-1
IC1003	B-2
Connector	
P1001	B-1
P1101	D-5

ADDRESS INFORMATION

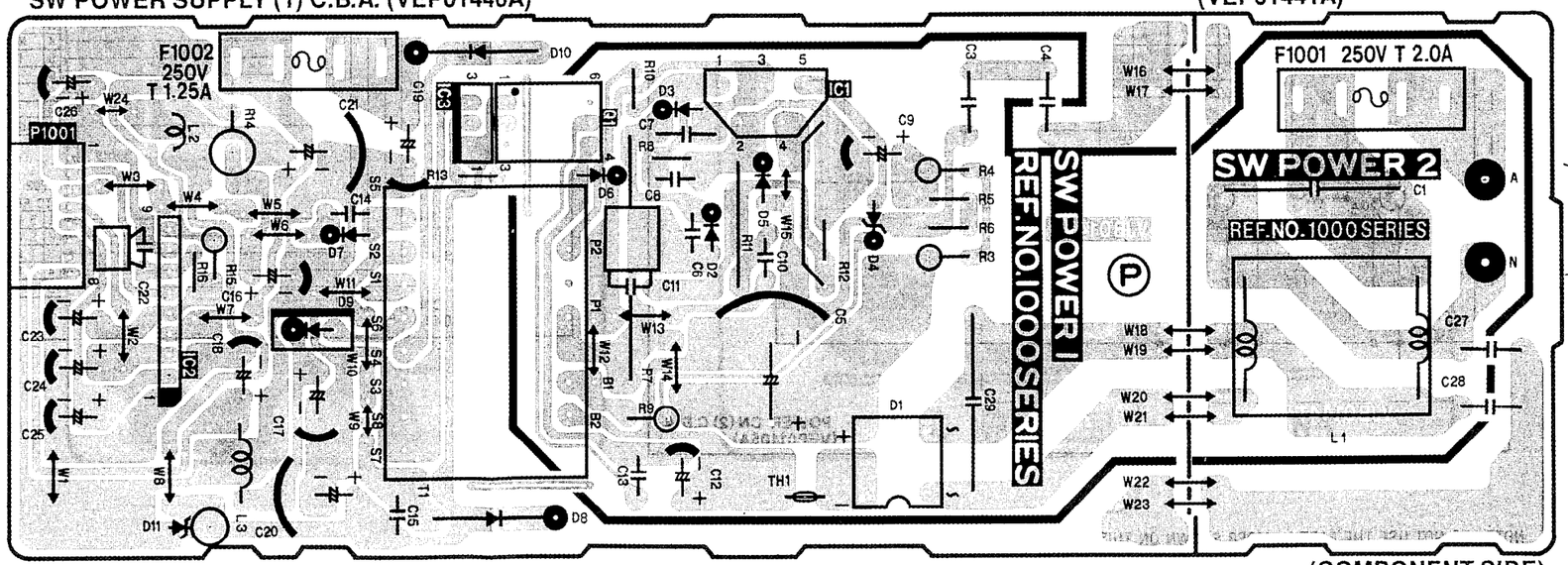
AC LINE CONNECTION C.B.A. (VEP01407B)



(FOIL SIDE)

SW POWER SUPPLY (1) C.B.A. (VEP01440A)

SW POWER SUPPLY (2) C.B.A. (VEP01441A)

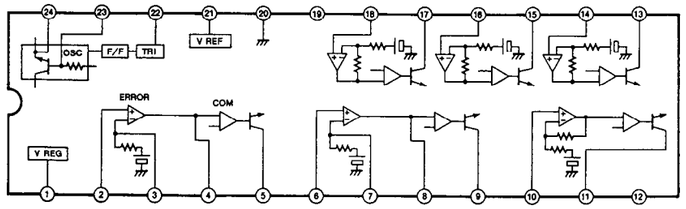


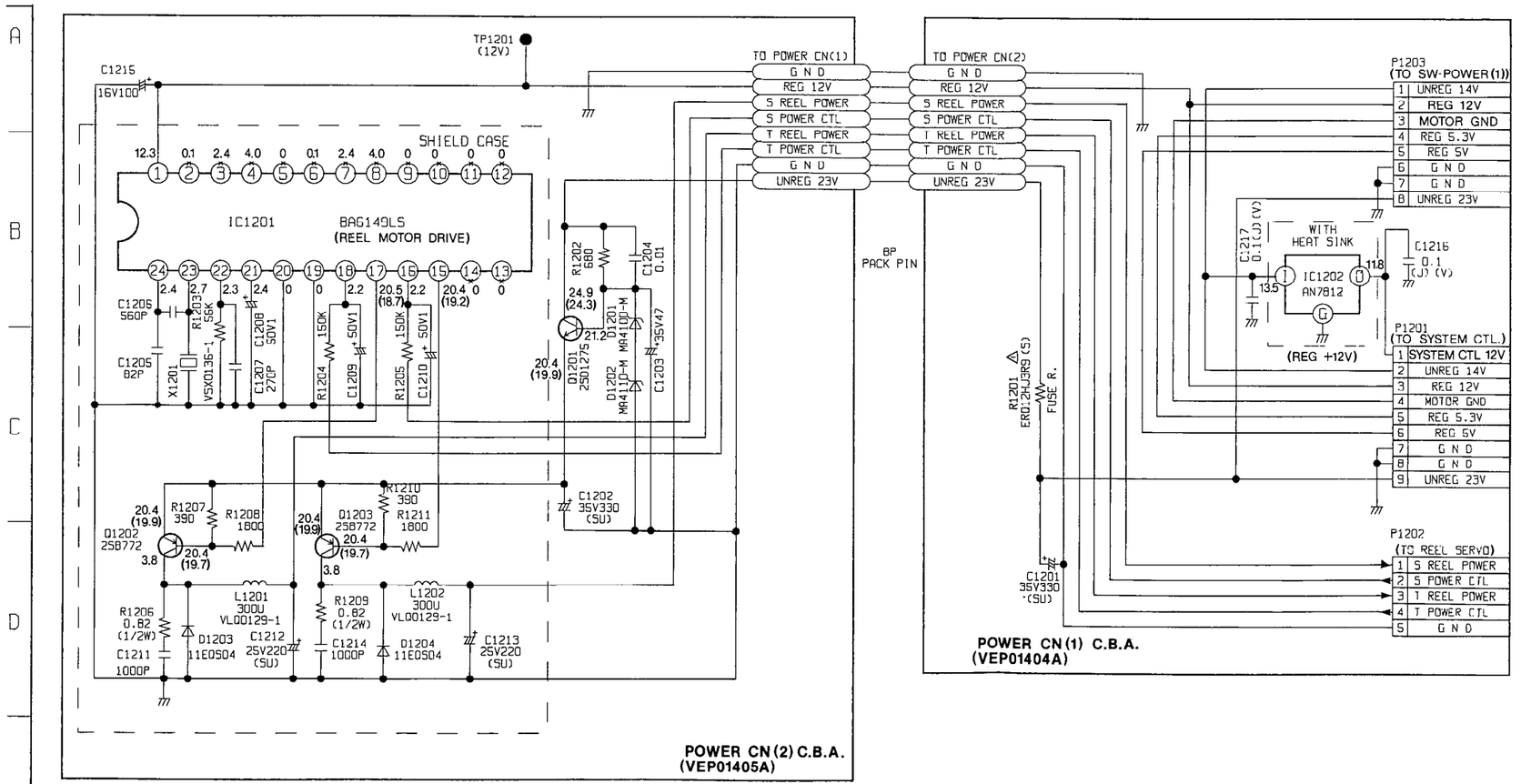
(COMPONENT SIDE)

POWER CONNECTION (1) AND POWER CONNECTION (2) SCHEMATIC DIAGRAM

IC INFORMATION

IC1201 BA6149LS





NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE. MEASUREMENT SIGNAL...PAL COLOUR SIGNAL.

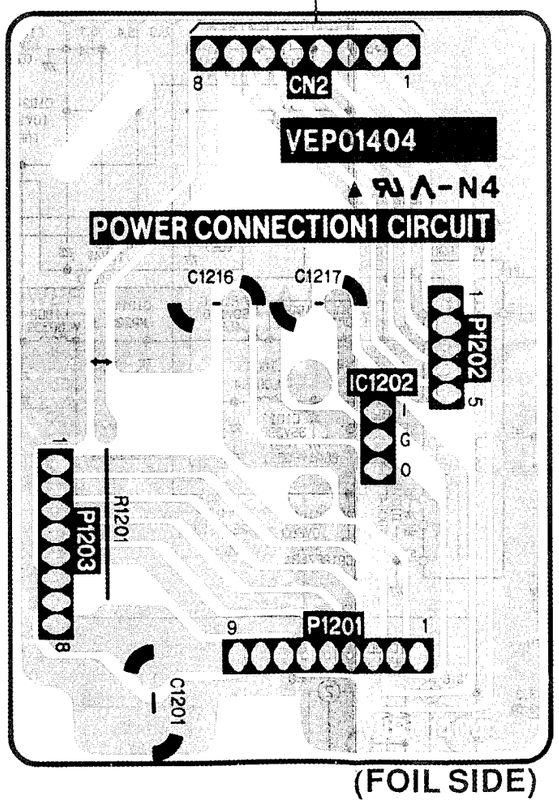
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

POWER CONNECTION (1) C.B.A. (VEP01404A) AND POWER CONNECTION (2) C.B.A. (VEP01405A)

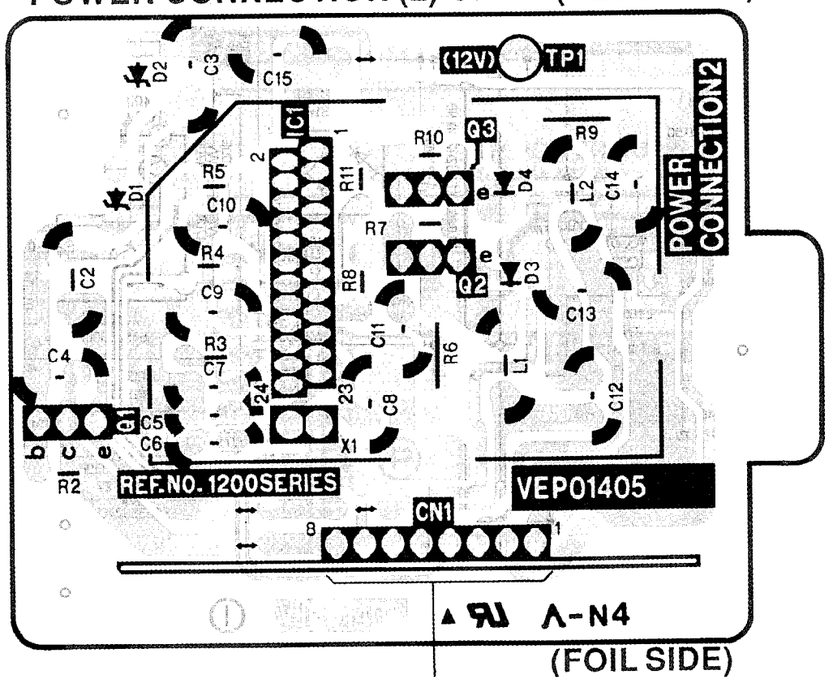
POWER CONNECTION (1) C.B.A. AND POWER CONNECTION (2) C.B.A.	
Transistors	
Q1201 Q1202 Q1203	A-2 B-3 B-3
Integrated Circuit	
IC1201 IC1202	B-3 B-2
Test Point	
TP1201	B-3
Connectors	
P1201 P1202 P1203	A-1 B-2 A-1

ADDRESS INFORMATION

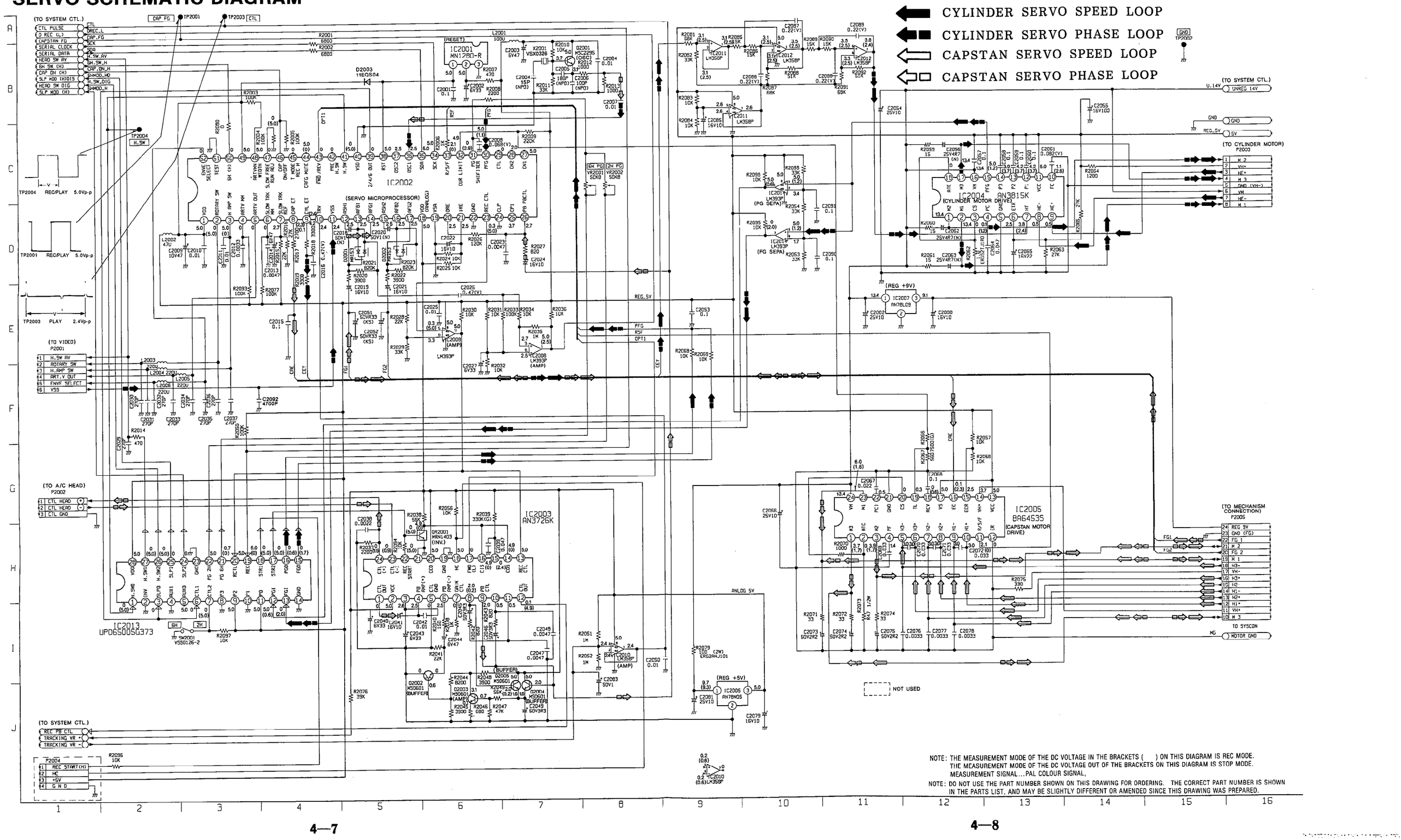
POWER CONNECTION (1) C.B.A. (VEP01404A)



POWER CONNECTION (2) C.B.A. (VEP01405A)



SERVO SCHEMATIC DIAGRAM

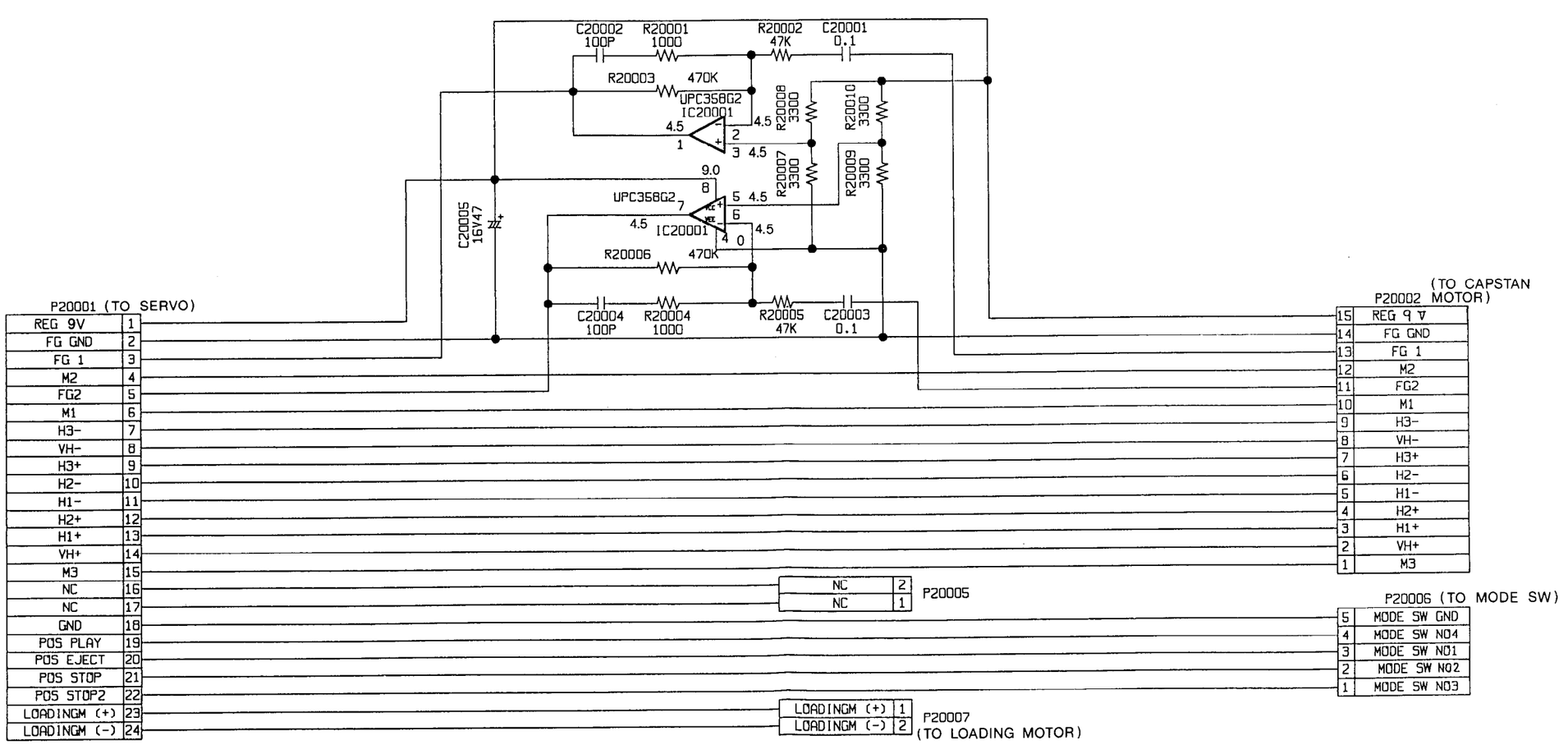


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MEASUREMENT SIGNAL...PAL COLOUR SIGNAL,

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

MOTOR BASE SCHEMATIC DIAGRAM

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MEASUREMENT SIGNAL...PAL COLOUR SIGNAL,

B A

1 2 3 4 5

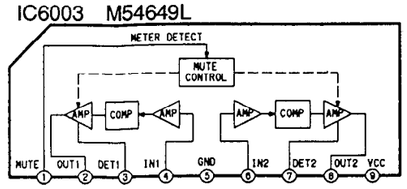
SYSTEM CONTROL
MODE SELECT

SERVO
MOTOR BASE

SYSTEM CONTROL SCHEMATIC DIAGRAM

IC INFORMATION

IC6003 M54649L

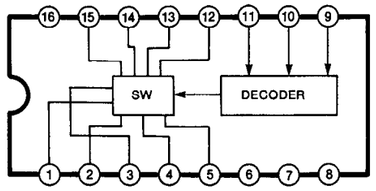


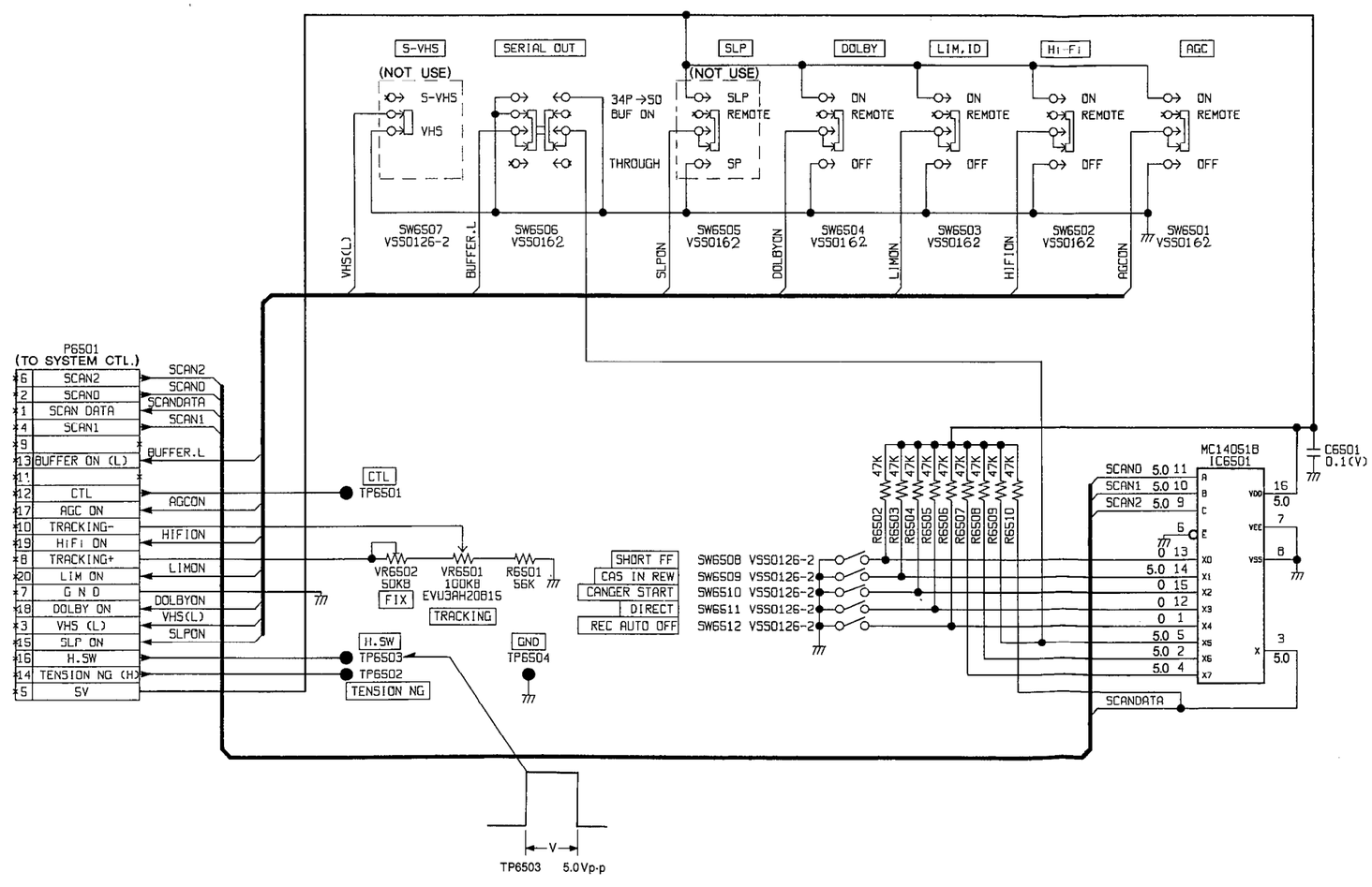
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

MODE SELECT SCHEMATIC DIAGRAM

IC INFORMATION

IC6501 MC14051B





NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MEASUREMENT SIGNAL...PAL COLOUR SIGNAL

SYSTEM CONTROL ICs DC VOLTAGE CHART

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.0	5.0	5.0	5.0	5.0	5.0	0	0	5.0	0	0	5.0	0	0	0	5.0	0	5.0	4.8	0
REC	5.0	5.0	5.0	5.0	5.0	5.0	0	0	5.0	0	0	5.0	0	0	0	5.0	0	5.0	0	4.8
FF	5.0	5.0	5.0	5.0	5.0	5.0	0	0	5.0	0	0	5.0	0	0	0	5.0	0	5.0	0	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	4.2	0	0	5.0	0	0	2.6	—	0	0	5.0	0	4.7	0	0	0
REC	0	4.8	0	0	4.2	0	5.0	5.0	0	0	2.6	—	0	0	5.0	4.8	4.7	0	0	0
FF	0	0	0	4.8	2.1	0	5.0	5.0	0	0	2.6	—	0	0	5.0	0	4.7	0	0	0
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	4.7	0.1	0.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0	0	0	0	0.4	0.1	0	0	0	0
REC	0.1	0.1	0.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0	4.7	0	5.0	0.4	0.1	0	0	0	0
FF	4.7	0.1	0.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0	4.7	0	0	0.4	0.1	0	0	0	0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	4.9	0	5.0	5.0	0	5.0	2.5	3.7	5.0	5.0	5.0	5.0	5.0	0	0	0	4.9	0	0	0
REC	4.9	0	0	5.0	5.0	5.0	2.5	3.7	5.0	5.0	5.0	5.0	5.0	0	0	0	4.9	0	0	4.9
FF	4.9	0	0	5.0	0.7	5.0	2.5	3.7	5.0	5.0	5.0	5.0	5.0	4.9	0	0	4.9	0	4.9	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	0	5.0	5.0																
REC	0	0	5.0	5.0																
FF	0	0	5.0	5.0																
REF. NO.	IC6002										IC6003									
MODE	1	2	3								1	2	3	4	5	6	7	8	9	10
STOP	5.0	5.0	0								0	0.2	0.2	0	0	0	11.8	9.8	11.8	0.2
REC	5.0	5.0	0								0	0.2	0.2	0	0	0	11.8	9.8	11.8	0.2
FF	5.0	5.0	0								0	0.2	0.2	0	0	0	11.8	9.8	11.8	0.2
REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	5.0	5.0	5.0	0.1	1.1	1.1	5.0	1.1	0.1	4.7	1.1	0	0.1	0.1						
REC	5.0	5.0	5.0	0.1	1.1	1.1	5.0	1.1	0.1	4.7	1.1	0	0.1	0.1						
FF	5.0	5.0	5.0	0.1	0	1.1	5.0	1.1	0.1	4.7	1.1	0	0.1	0.1						
REF. NO.	IC6005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	5.0	5.0	0	0	0	0	0	0	0	0	10.3	10.3	0.9	0.9	0				
REC	0	5.0	5.0	0	0	0	0	0	0	0	0	10.3	10.3	0.9	0.9	0				
FF	0	5.0	5.0	0	0	0	0	0	0	0	0	10.3	10.3	0.9	0.9	0				
REF. NO.	IC6006																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	0	4.7	4.7	0	0	0	5.0	3.1	0	0	0	0	12.2	3.6	5.0	0	0.1	5.0		
REC	0	4.7	0.1	0	0	4.8	5.0	3.1	0	0	0	0	0.1	3.6	5.0	5.0	0.1	5.0		
FF	0	4.7	4.7	0	0	0	5.0	3.1	0	0	0	0	12.2	3.6	5.0	0	0.1	5.0		
REF. NO.	IC6007																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	0	4.7	3.1	0	0	0	0	5.0	0	0	0	3.1	4.3	3.7	5.1	0	0	3.6		
REC	0	0.1	3.1	0	0	0	0	5.0	0	0	0	3.1	4.3	3.7	5.1	0	4.2	3.6		
FF	0	4.7	3.1	0	0	0	0	5.0	0	0	0	3.1	4.3	3.7	5.1	0	0	3.6		
REF. NO.	IC6008																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	4.9	4.3	0	4.8	0	0	0	0	0	0	10.1	10.1	10.1	10.1	0	10.1	10.7	0		
REC	4.9	4.3	0	0	0	0	4.8	4.8	0	0	0.3	0.3	10.0	10.0	0	10.0	10.7	0		
FF	4.9	2.1	0	0	0	4.8	0	0	0	0	10.1	10.1	0.3	10.2	0	10.1	5.8	0		
REF. NO.	IC6009																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	0	0	0	0	0	0	0	4.9	0	0	0	5.0	5.0	5.0	10.3	10.6	10.5	0.6		
REC	4.7	0	4.9	4.9	0	0	0	4.9	0	0	0	5.0	5.0	5.0	10.3	0.3	10.5	0		
FF	4.7	0	0	4.9	0	0	0	4.9	0	0	0	5.0	5.0	5.0	0.3	10.6	10.5	0		
REF. NO.	IC6010																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	0	0	2.1	2.1	0.1	4.7	0	0	0	0	0	0	0	0	0	0.1	0	0		
REC	0	0	2.1	2.1	0.1	4.7	0	4.7	0	0	0	0	0	0	0	0.1	0	0		
FF	4.9	0	2.1	2.1	0.1	4.7	0	4.7	0	0	0	0	0	0	0	0.1	0	0		
REF. NO.	IC6012																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	5.0	5.0	0	5.0	0	0	0	0	0	4.6	5.0	0	0	5.0						
REC	5.0	5.0	0	0	0	0	0	0	5.0	0	5.0	0	0	5.0						
FF	0	5.0	0	5.0	0	0	0	0	0	4.6	5.0	0	0	5.0						
REF. NO.	IC2301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	11.7	11.8	10.7	11.8	0	11.8	0	0	0	0	0	0	0	0	11.8				
REC	0	11.7	11.8	10.7	11.8	0	11.8	0	0	0	0	0	0	0	0	11.8				
FF	0	8.3	11.8	5.6	11.8	3.2	8.7	0	0	0	0	0	0	0	0	11.8				

SYSTEM CONTROL TRs DC VOLTAGE CHART

REF. NO. / MODE	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	5.0	1.0	4.6	12.9	1.6	12.8	12.9	13.5	13.4	12.2	0	12.6	12.6	0	12.2	0	0	0
REC	5.0	0	4.6	12.9	1.6	12.8	12.8	13.5	13.4	12.2	0	12.6	12.6	0	12.2	0	0	0
FF	5.0	1.0	4.6	12.9	1.6	12.8	12.8	13.5	13.4	12.2	0	12.6	12.6	0	12.2	0	0	0
REF. NO. / MODE	Q6007			Q6008			Q6009											
	E	C	B	E	C	B	E	C	B									
STOP	0	0	0	12.2	0.1	12.3	0	0	0.6									
REC	0	0	0	12.2	12.2	11.5	0	0	0.6									
FF	0	0	0	12.2	0.1	12.3	0	0	0.6									
REF. NO. / MODE	QR6003			QR6004			QR6005			QR6006			QR6007			QR6008		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	12.1	−0.3	0	9.8	0	0	12.6	0.1	0	0	4.7	0	5.0	0	0	0	5.0
REC	0	12.1	−0.3	0	9.8	0	0	12.6	0.1	0	4.1	0.1	0	0	4.1	0	0	5.0
FF	0	12.3	−0.3	0	9.8	0	0	12.6	0.1	0	0	4.7	0	5.0	0	0	0	5.0
REF. NO. / MODE	QR6009			QR6010			QR6011			QR6012								
	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0	2.9	0	0	0	2.9	0	0	0	0	0	0						
REC	0	2.9	0	0	0	2.9	0	0	0	0	0	0						
FF	0	0	4.9	0	0	0	0	0	0	0	0	0						

SYSTEM CONTROL & SERVO C.B.A., REAR JACK (1) C.B.A., 34P CONNECTION C.B.A., MODE SELECT C.B.A., MOTOR BASE C.B.A., REMOTE CONTROL JACK C.B.A., 9P CONNECTION C.B.A., FRONT (1) C.B.A. AND SUB SYSTEM CONTROL C.B.A.

Transistors

Q2001	G-3
Q2002	F-1
Q2003	F-2
Q2004	F-1
Q2005	F-1
Q6001	C-1
Q6002	C-6
Q6003	C-6
Q6004	C-6
Q6005	C-6
Q6006	C-6
Q6007	C-6
Q6008	C-2
Q6009	C-2

Transistors & Resistors

QR2001	E-2
QR6003	C-6
QR6004	D-4
QR6005	C-6
QR6006	D-3
QR6007	E-3
QR6008	F-7
QR6009	G-6
QR6010	G-6
QR6011	E-6
QR6012	E-7
QR6901	A-8

Integrated Circuits

IC2001	F-3
IC2002	F-2
IC2003	E-1
IC2004	D-2
IC2005	D-2
IC2006	D-1
IC2007	E-3
IC2008	G-3
IC2010	F-1
IC2011	E-2
IC2012	D-2
IC2013	E-2
IC2014	E-1
IC2301	B-11
IC6001	F-5
IC6002	G-5
IC6003	D-5
IC6004	E-3
IC6005	F-6
IC6006	C-2
IC6007	C-3
IC6008	C-4
IC6009	F-6
IC6010	E-6
IC6012	C-5
IC6501	E-9
IC20001	B-8

Test Points

TP2001	G-4
TP2002 (GND)	C-1
TP2003	F-3
TP2004	F-2
TP6001 (GND)	C-4
TP6501	F-8
TP6502	F-8
TP6503	F-9
TP6504	F-9

Adjustments

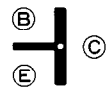
VR2001	D-3
VR2002	D-3
VR6501	F-10
VR6502	F-9
VR6601	D-13
VR6602	D-12
VR6603	D-12
VR6604	D-12

Connectors

P1301	C-5
P1302	C-5
P2001	G-1
P2002	E-1
P2003	C-1
P2004	F-1
P2005	D-5
P6002	G-4
P6003	C-6
P6004	C-4
P6005	C-4
P6006	G-6
P6007	F-6
P6008	D-6
P6009	C-6
P6010	C-2
P6011	C-3
P6012	C-3
P6013	D-6
P6014	F-7
P6015	E-7
P6201	A-3
P6202	A-1
P6203	A-2
P6501	D-8
P6551	A-6
P6552	A-5
P6601	D-12
P6602	E-12
P6603	E-13
P6801	G-11
P6901	B-8
P20001	C-9
P20002	B-8
P20005	C-9
P20006	C-9
P20007	C-9

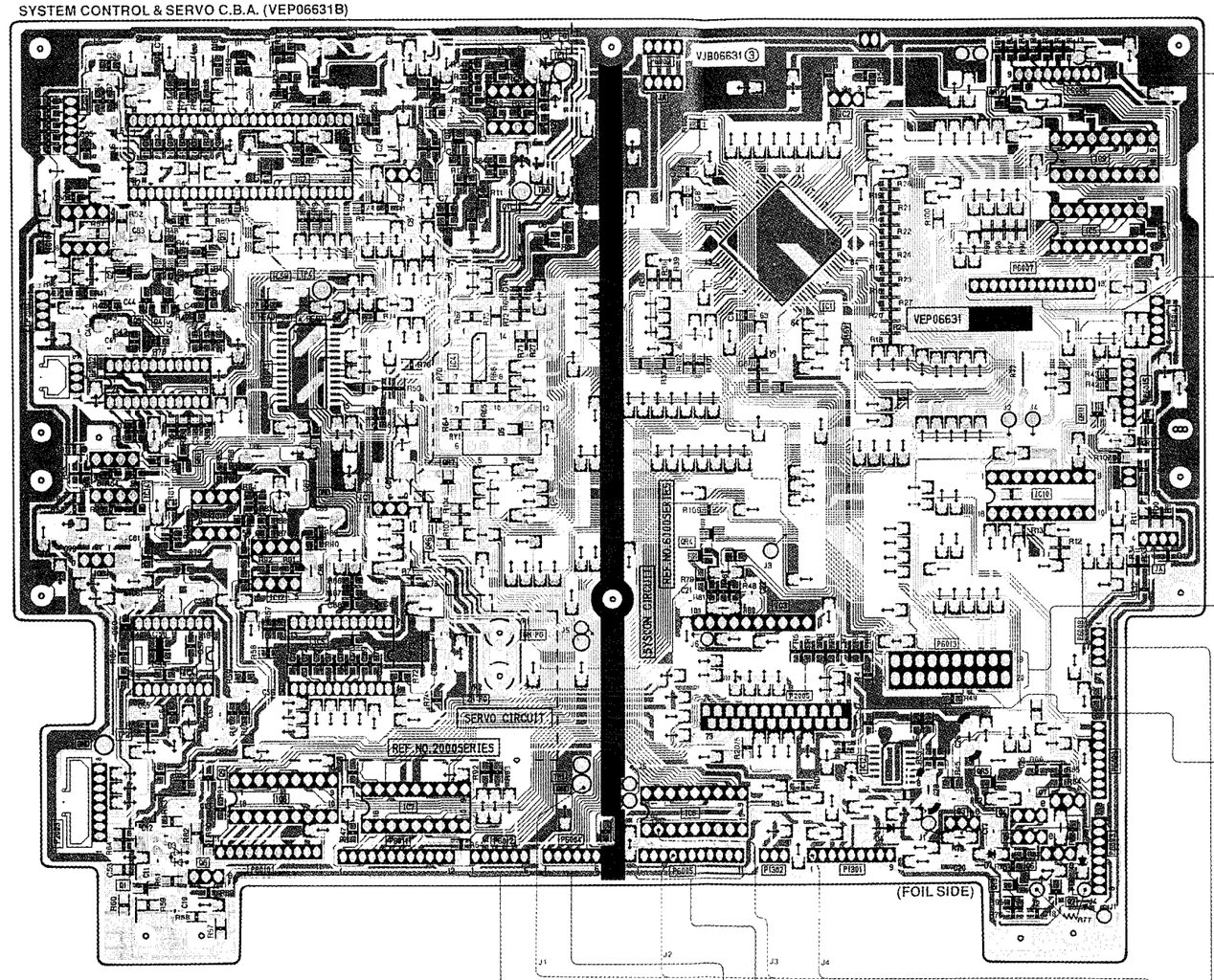
ADDRESS INFORMATION

TRANSISTOR INFORMATION

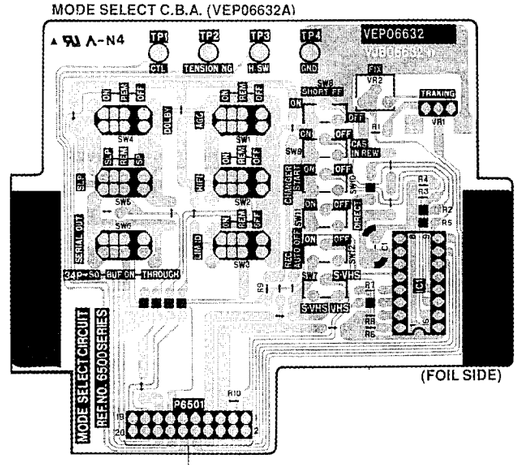


SYSTEM CONTROL & SERVO C.B.A. (VEP06631B), REAR JACK (1) C.B.A. (VEP06627B), 34P CONNECTION C.B.A. (VEP06630B), MOTOR BASE C.B.A. (VEP00P76A), REMOTE CONTROL JACK C.B.A. (VEP06625B), 9P CONNECTION C.B.A. (VEP06626A), FRO SYSTEM CONTROL SUB C.B.A. (VEP00Q58A)

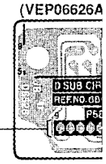
SYSTEM CONTROL & SERVO C.B.A. (VEP06631B)



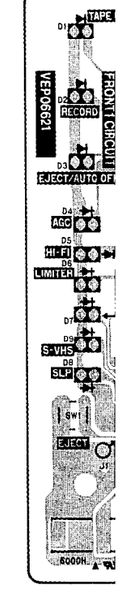
MODE SELECT C.B.A. (VEP06632A)



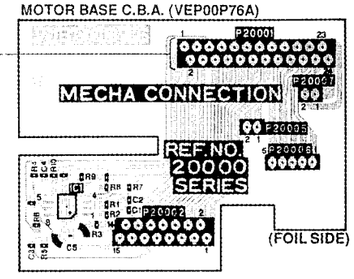
9P CONNEC (VEP06626A



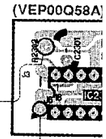
FRONT (1) C (VEP0662iA)



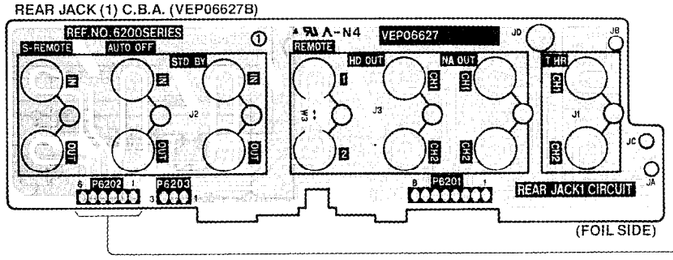
MOTOR BASE C.B.A. (VEP00P76A)



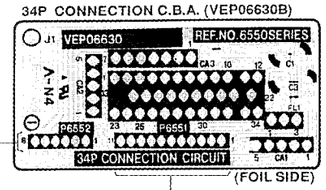
SYSTEM CO (VEP00Q58A)



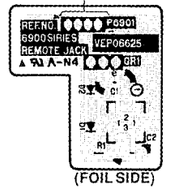
REAR JACK (1) C.B.A. (VEP06627B)



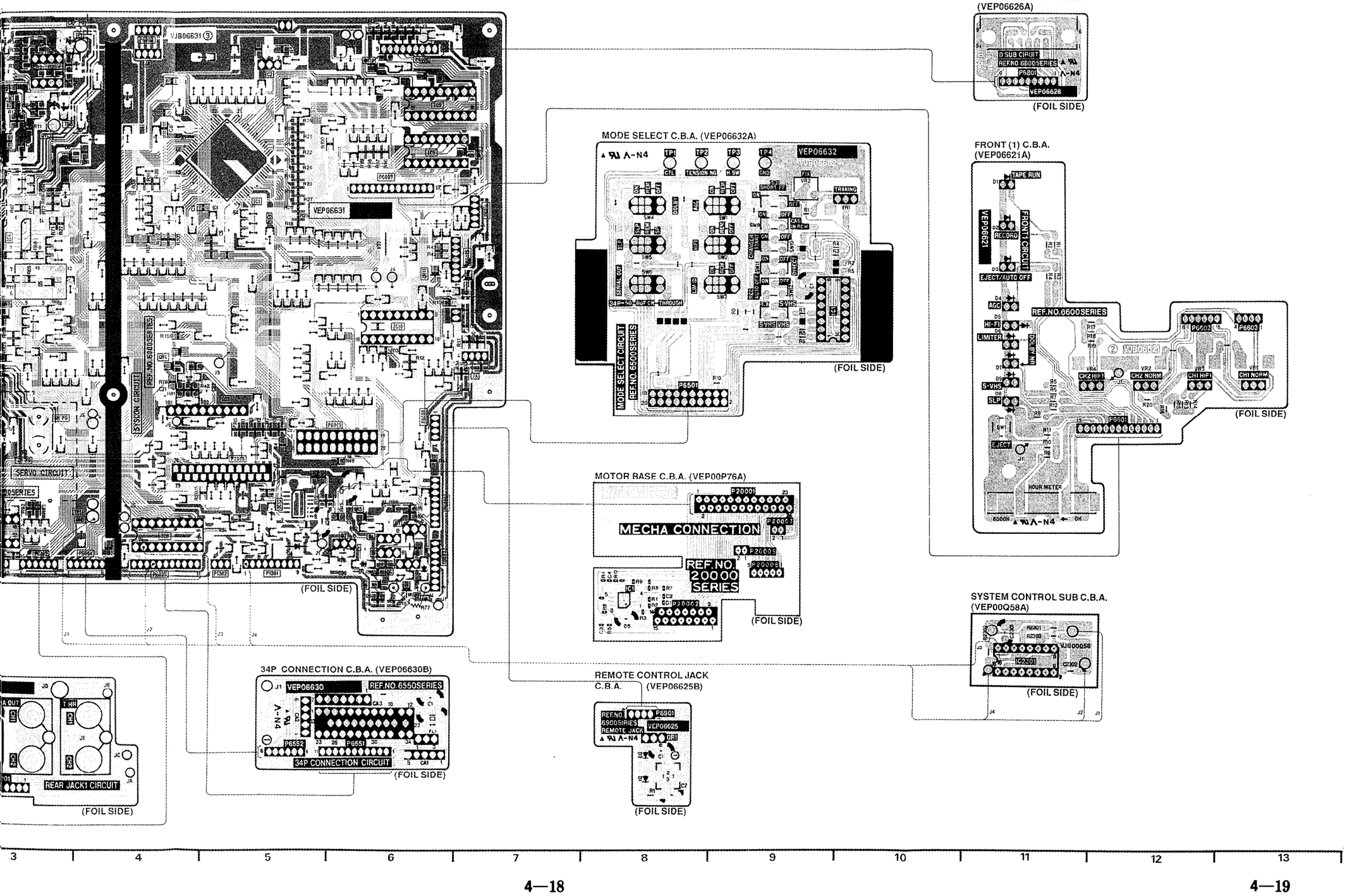
34P CONNECTION C.B.A. (VEP06630B)



REMOTE CONTROL JACK C.B.A. (VEP06625B)

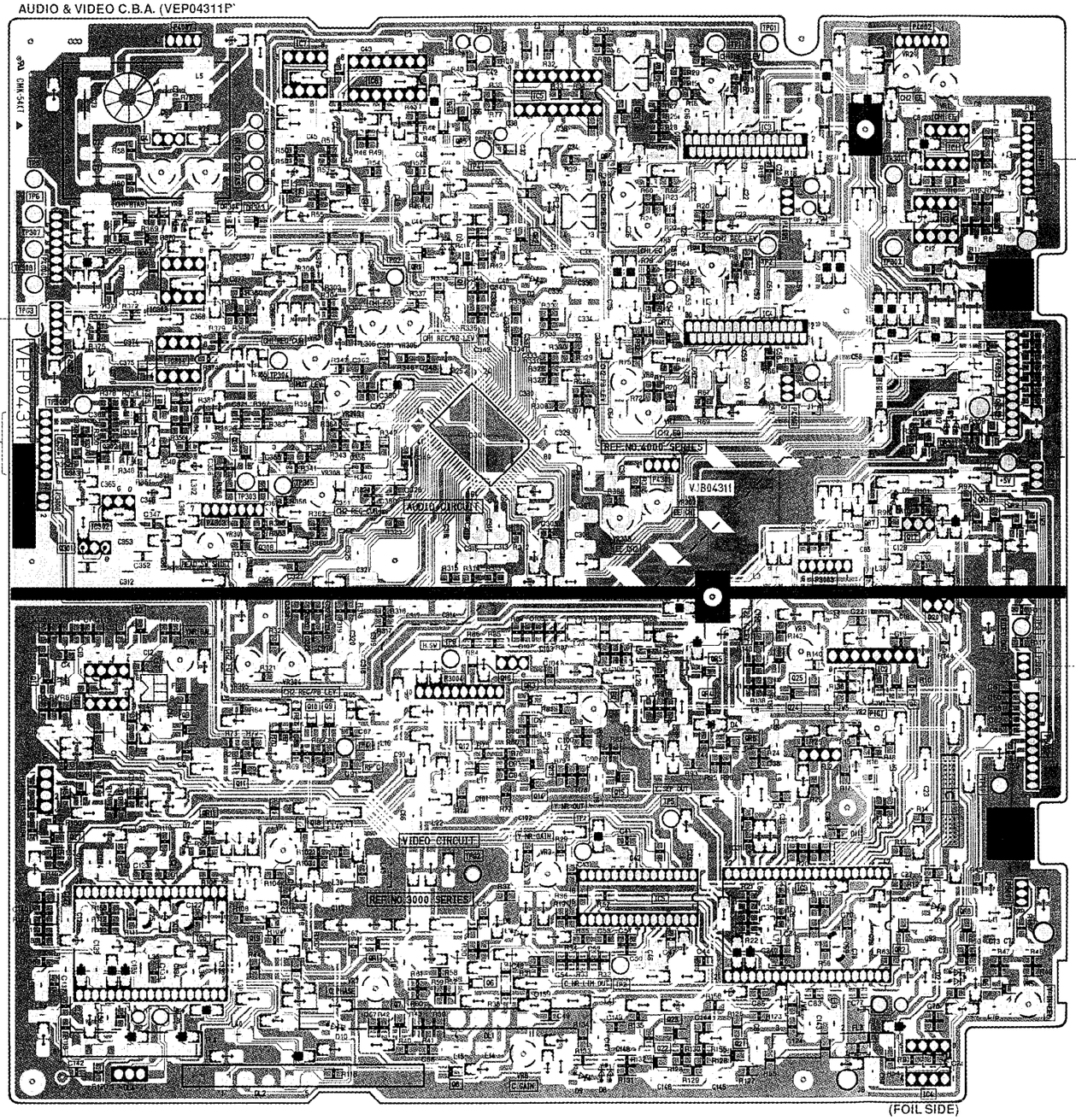


C.B.A. (VEP06631B), REAR JACK (1) C.B.A. (VEP06627B), 34P CONNECTION C.B.A. (VEP06630B), MODE SELECT C.B.A. (VEP06632A), 76A), REMOTE CONTROL JACK C.B.A. (VEP06625B), 9P CONNECTION C.B.A. (VEP06626A), FRONT (1) C.B.A. (VEP06621A) AND . (VEP00Q58A)

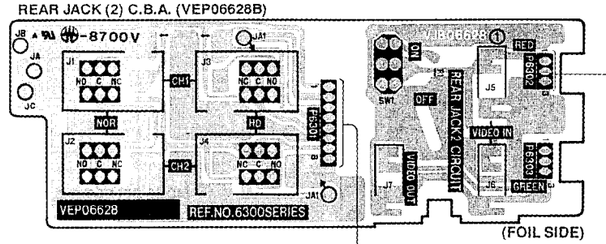


AUDIO & VIDEO C.B.A. (VEP04311B), REAR JACK (2) C.B.A. (VEP06628B), FONT (2) C.B.A. (VEP06622A), MODULAR JACK C.B.A. (VEP04288B) AND ID DUMMY C.B.A. (VEP00Q72A)

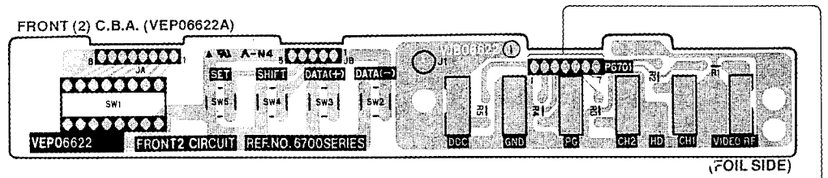
AUDIO & VIDEO C.B.A. (VEP04311B)



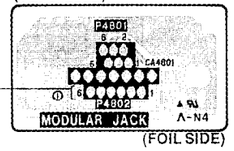
REAR JACK (2) C.B.A. (VEP06628B)



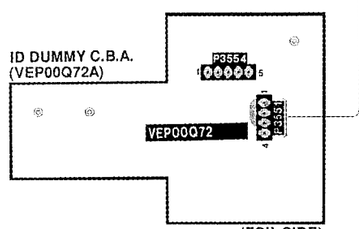
FRONT (2) C.B.A. (VEP06622A)



MODULAR JACK C.B.A. (VEP04288B)



ID DUMMY C.B.A. (VEP00Q72A)



AUDIO & VIDEO C.B.A., MODULAR JACK C.B.A., FRONT (2) C.B.A. REAR JACK (2) C.B.A., AND ID DUMMY C.B.A.

Transistors

Q3001	C-1
Q3002	D-2
Q3003	C-2
Q3004	C-6
Q3005	A-6
Q3006	B-4
Q3007	A-3
Q3008	A-3
Q3009	C-3
Q3010	C-3
Q3011	C-2
Q3012	C-3
Q3013	C-4
Q3014	C-4
Q3015	C-4
Q3016	C-4
Q3017	D-6
Q3018	B-3
Q3019	B-2
Q3020	D-6
Q3021	A-5
Q3022	A-5
Q3023	A-5
Q3024	C-5
Q3025	C-5
Q3026	C-1
Q4001	F-3
Q4002	F-2
Q4003	F-3
Q4004	F-2
Q4302	E-1
Q4303	D-1
Q4304	E-2
Q4305	E-2
Q4306	F-1
Q4307	F-2
Q4308	D-2
Q4309	E-2

Transistors & Resistors

QR3001	B-3
QR3002	B-6
QR3003	C-4
QR3004	C-5
QR3005	C-5
QR3007	D-6
QR3008	B-6
QR3009	D-7
QR3010	D-6
QR3011	C-2
QR4001	F-3
QR4002	F-4
QR4003	F-4
QR4004	F-3
QR4005	F-3
QR4006	F-4
QR4007	E-5
QR4301	E-6
QR4302	E-6
QR4303	F-2
QR4304	F-2

Integrated Circuits

IC3001	C-1
IC3002	C-6
IC3003	B-5
IC3004	A-6
IC3005	B-5
IC3006	B-2
IC4001	F-6
IC4002	F-6
IC4003	F-5
IC4004	E-5
IC4005	G-4
IC4006	G-3
IC4007	G-2
IC4301	E-3
IC4302	D-1
IC4303	E-2
IC4304	E-2

Test Points

TP3001	B-4
TP3002	B-2
TP3003	D-7
TP3004	C-3
TP3005	C-5
TP3006	C-3
TP3007	D-6
TP4001	G-5
TP4002	F-5
TP4003	G-4
TP4004	F-3
TP4005	F-1
TP4006	F-1
TP4301	F-6
TP4302	F-6
TP4303	D-2
TP4304	E-2
TP4305	D-3
TP4306	E-1
TP4307	F-1
TP4308	F-1
TPG3001	C-6
TPG3002	B-3
TPG4001	G-5
TPG4002	F-3
TPG4003	E-1

Adjustments

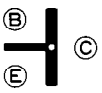
VR3001	C-2
VR3002	C-6
VR3003	B-4
VR3004	B-2
VR3005	A-7
VR3006	C-4
VR3007	A-3
VR3008	A-4
VR3009	D-5
VR3304	C-2
VR3305	C-2
VR4001	F-6
VR4002	G-6
VR4003	G-5
VR4004	F-4
VR4005	F-5
VR4006	F-5
VR4007	E-5
VR4008	E-4
VR4009	F-2
VR4010	F-2
VR4301	D-2
VR4302	D-5
VR4303	D-4
VR4304	C-2
VR4305	C-2
VR4306	E-3
VR4307	E-3
VR4308	D-3
VR4309	E-3
VR4310	E-3

Connectors

P3001	D-7
P3002	C-7
P3003	D-5
P3004	C-3
P3006	C-7
P3007	B-7
P3008	D-1
P3551	A-10
P3554	B-10
P4001	F-7
P4002	G-6
P4003	E-6
P4004	F-1
P4005	F-5
P4006	E-5
P4007	G-2
P4301	D-5
P4302	E-1
P4303	D-2
P4304	E-1
P4801	D-8
P4802	D-8
P6301	F-9
P6302	F-10
P6303	F-10
P6701	E-10

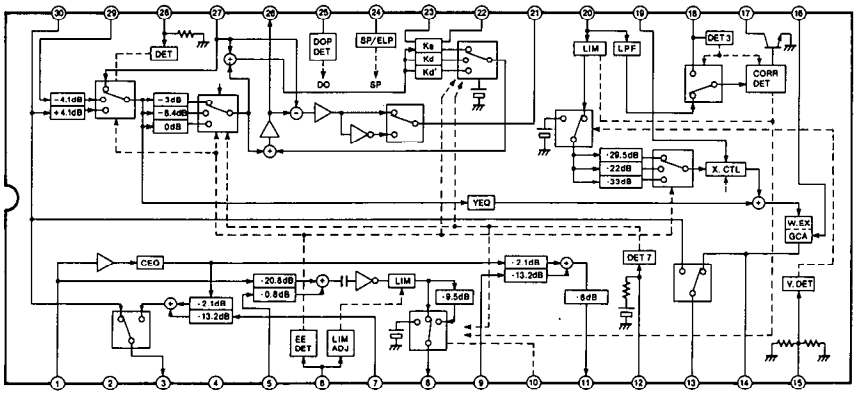
ADDRESS INFORMATION

TRANSISTOR INFORMATION



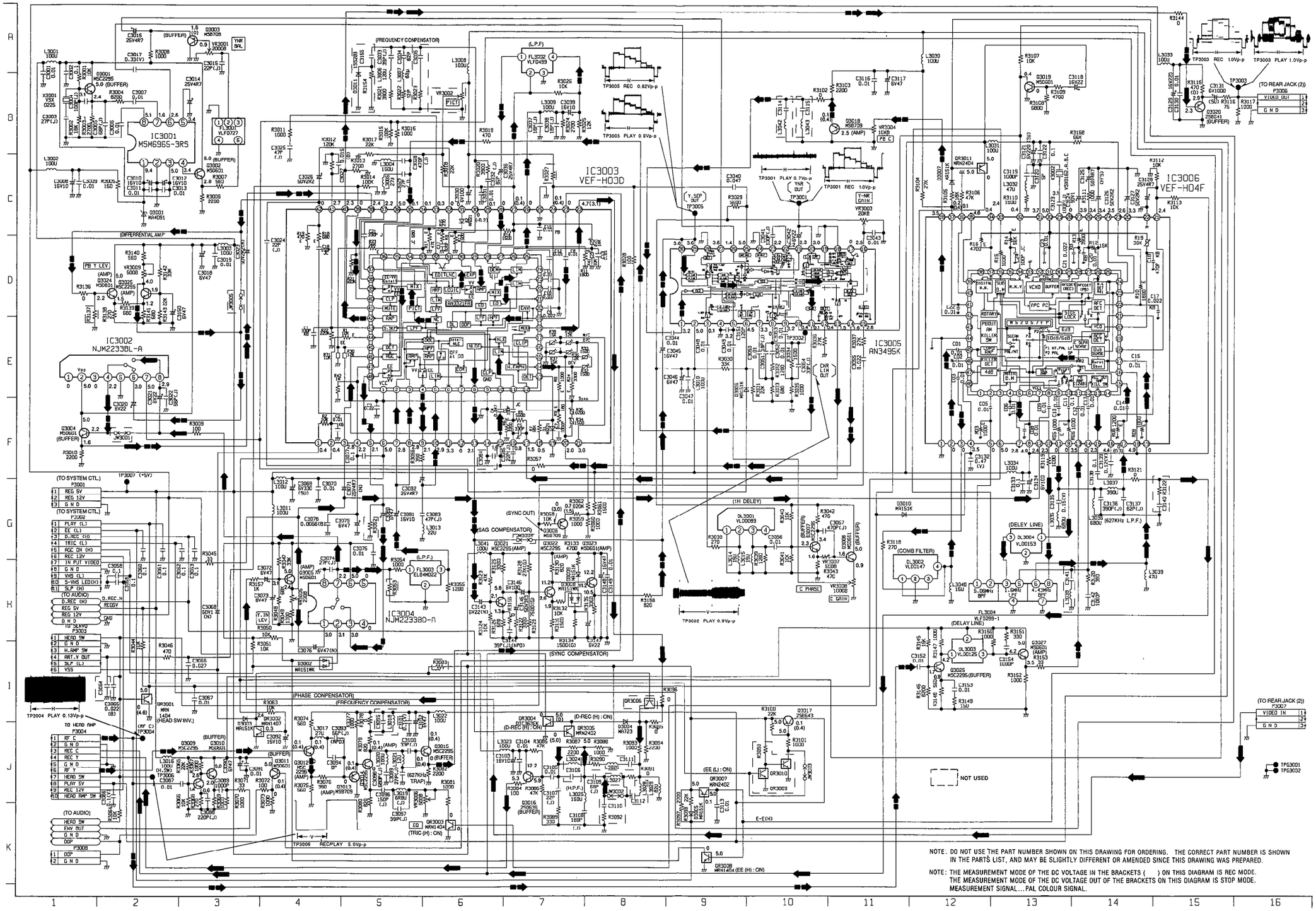
IC INFORMATION

IC3005 AN3495K



VIDEO SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE MAIN SIGNAL PATH IN PLAYBACK MODE

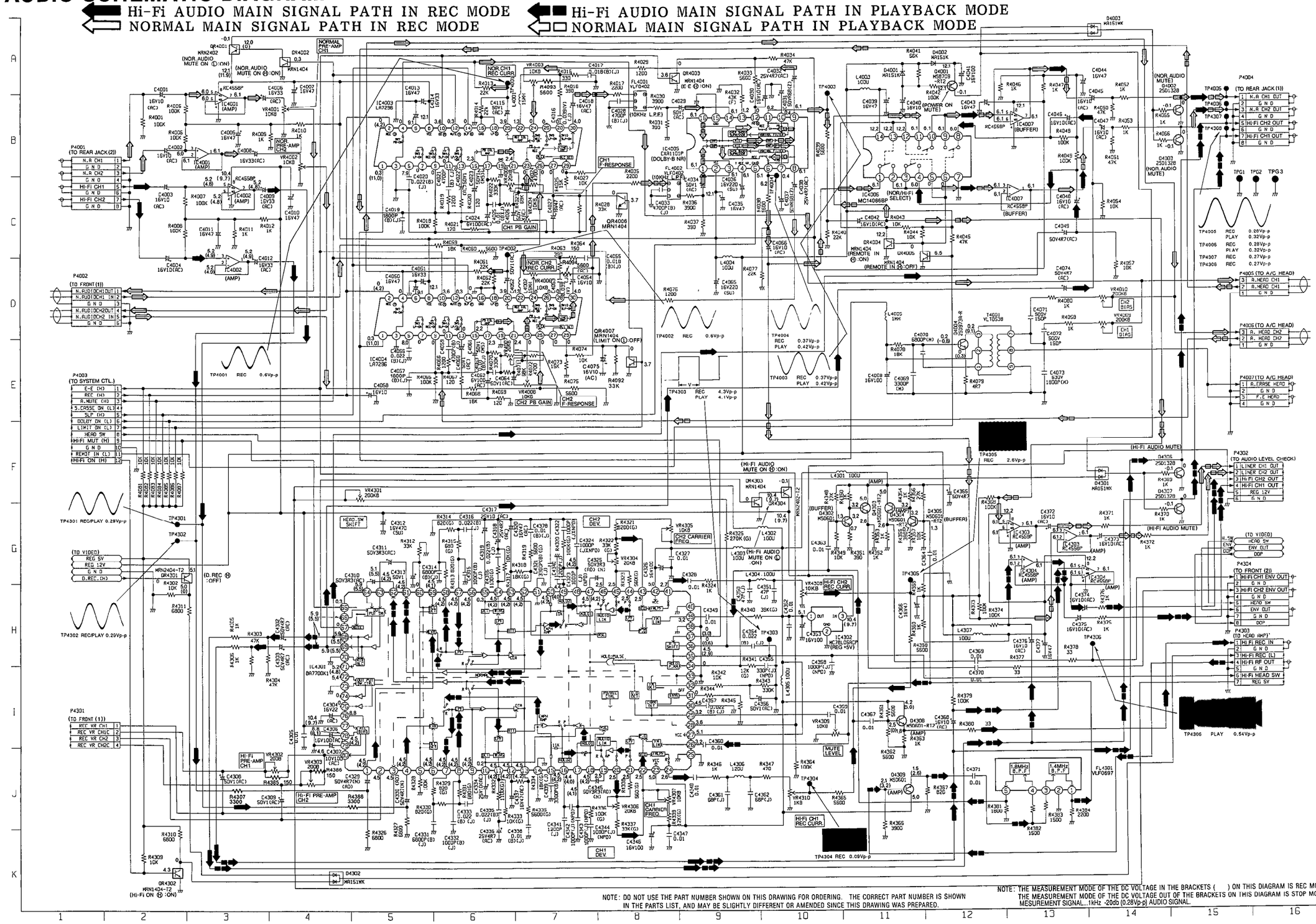


NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE. MEASUREMENT SIGNAL...PAL COLOUR SIGNAL.

AUDIO SCHEMATIC DIAGRAM

Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE
NORMAL MAIN SIGNAL PATH IN REC MODE
Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
NORMAL MAIN SIGNAL PATH IN PLAYBACK MODE

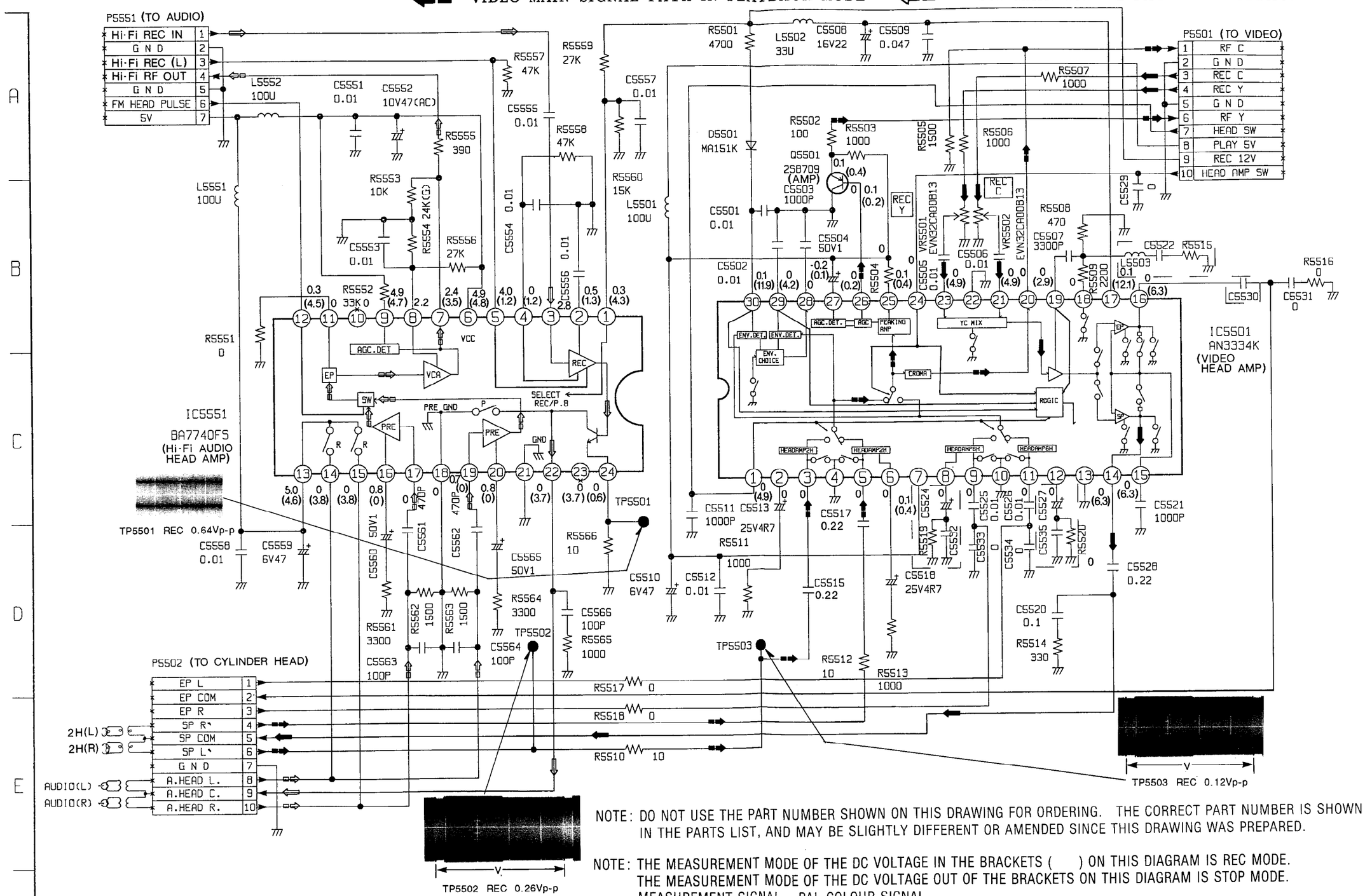


NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MESUREMENT SIGNAL...1kHz -20db (0.28Vp-p) AUDIO SIGNAL.

HEAD AMP SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

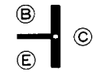


NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.
MEASUREMENT SIGNAL...PAL COLOUR SIGNAL.

HEAD AMP C.B.A. (VEP05151C)

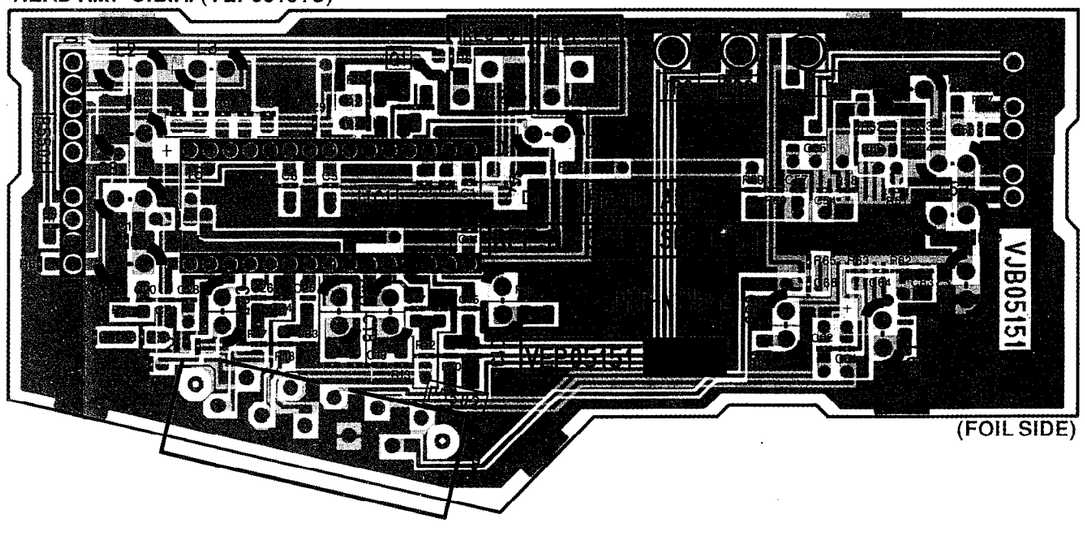
TRANSISTOR INFORMATION



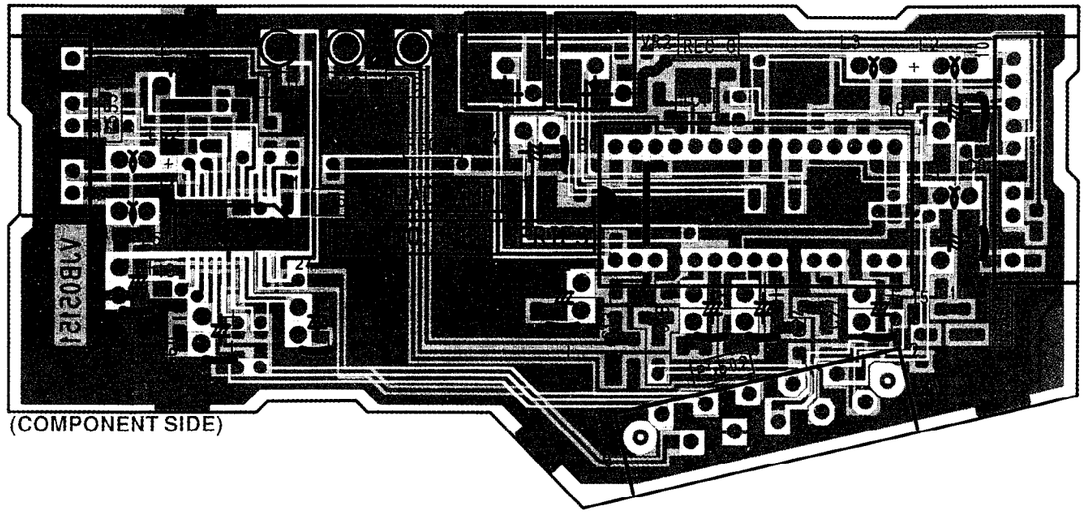
HEAD AMP C.B.A.	
Transistor	
Q5501	B-2 Ⓕ
Integrated Circuits	
IC5501	B-7 Ⓒ
IC5501	B-2 Ⓕ
IC5551	B-5 Ⓒ
Test Points	
TP5501	B-5 Ⓒ
TP5501	B-3 Ⓕ
TP5502	B-6 Ⓒ
TP5502	B-3 Ⓕ
TP5503	B-6 Ⓒ
TP5503	B-3 Ⓕ
Adjustments	
VR5501	B-6 Ⓒ
VR5501	B-3 Ⓕ
VR5502	B-6 Ⓒ
VR5502	B-2 Ⓕ
Connectors	
P5501	A-8 Ⓒ
P5501	B-1 Ⓕ
P5502	A-7 Ⓒ
P5502	A-2 Ⓕ
P5551	B-5 Ⓒ
P5551	B-4 Ⓕ

ADDRESS INFORMATION
Ⓒ... COMPONENT SIDE
Ⓕ... FOIL SIDE

HEAD AMP C.B.A. (VEP05151C)



(FOIL SIDE)



(COMPONENT SIDE)

B
A

1 2 3 4 5 6 7 8

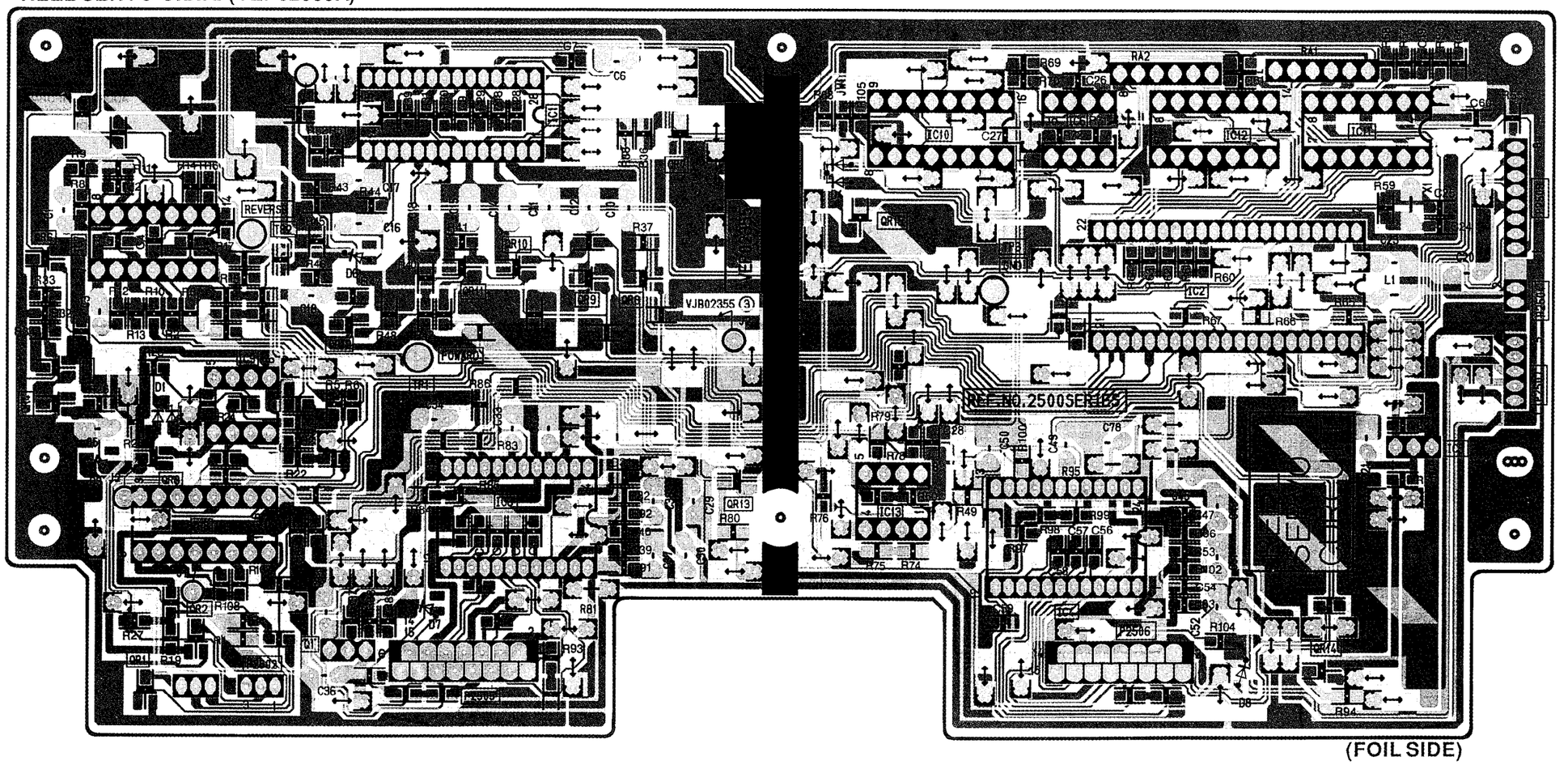
REEL SERVO C.B.A. (VEP02355A)

TRANSISTOR INFORMATION

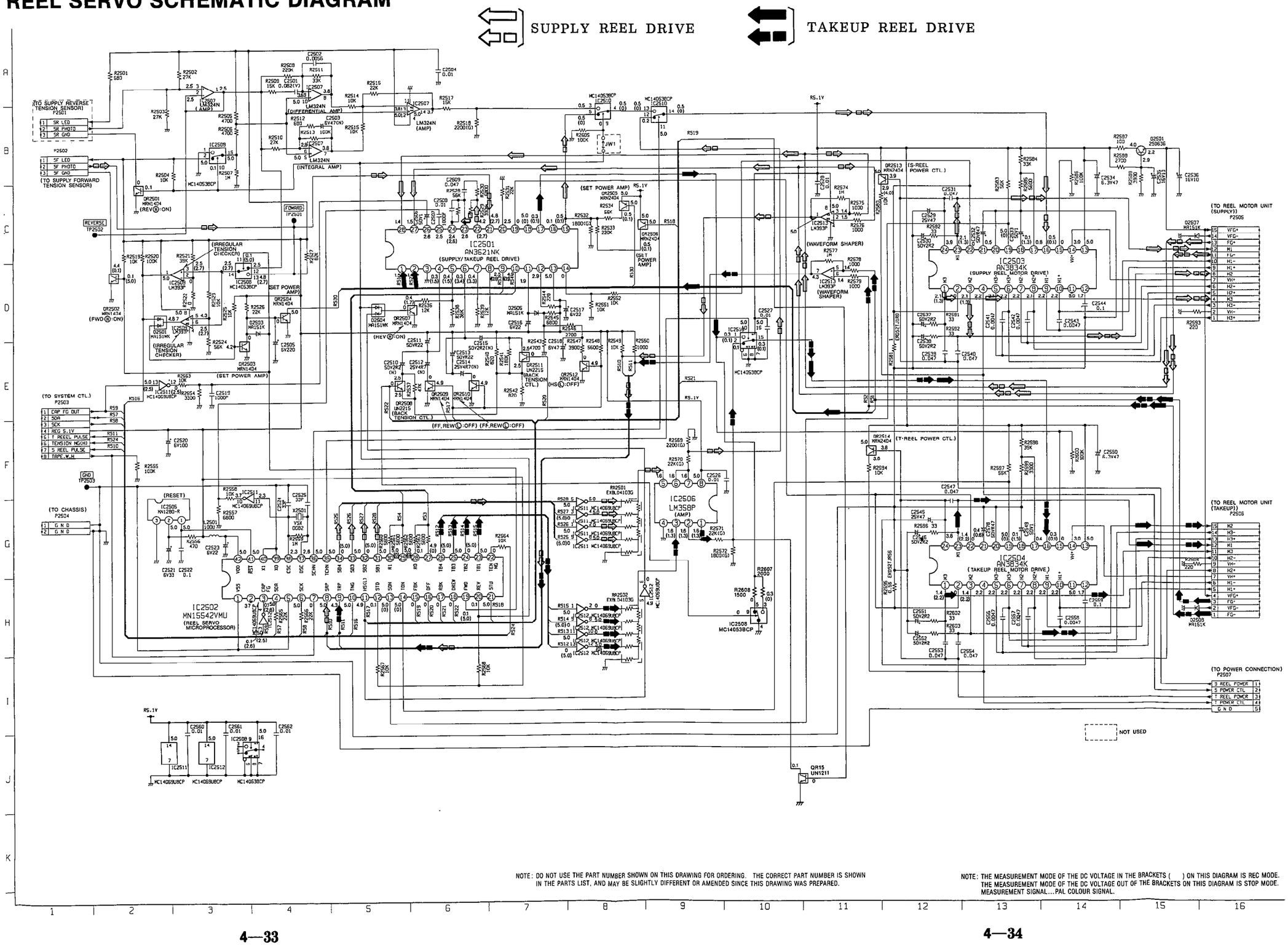
REEL SERVO C.B.A.	
Transistor	
Q2501	A-2
Transistors & Resistors	
QR2501	A-1
QR2502	A-1
QR2503	B-1
QR2504	B-1
QR2505	B-1
QR2506	B-1
QR2507	C-3
QR2508	B-3
QR2509	B-3
QR2510	B-2
QR2511	B-2
QR2512	B-2
QR2513	B-3
QR2514	A-5
QR2515	B-4
Integrated Circuits	
IC2501	C-2
IC2502	B-5
IC2503	A-2
IC2504	A-4
IC2505	B-6
IC2506	C-4
IC2507	B-1
IC2508	A-1
IC2509	B-2
IC2510	C-4
IC2511	C-5
IC2512	C-5
IC2513	A-4
Test Points	
TP2501	B-2
TP2502	B-2
TP2503 (GND)	B-4
Connectors	
P2502	A-2
P2503	C-6
P2504	B-6
P2505	A-2
P2506	A-4
P2507	B-6

ADDRESS INFORMATION

REEL SERVO C.B.A. (VEP02355A)



REEL SERVO SCHEMATIC DIAGRAM



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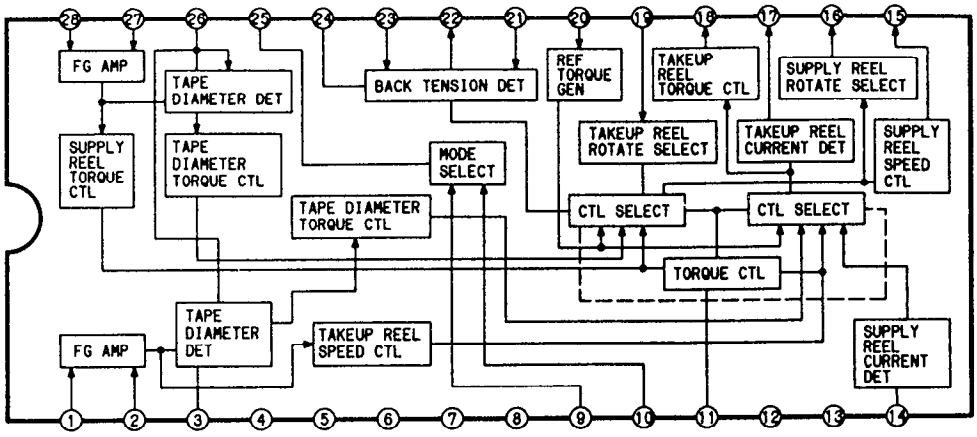
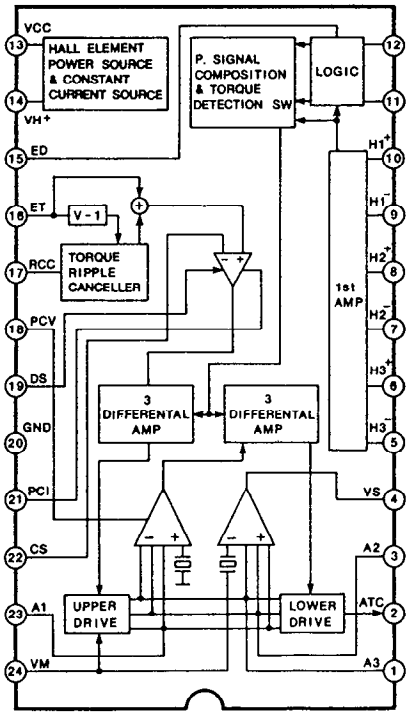
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE. MEASUREMENT SIGNAL...PAL COLOUR SIGNAL.

IC INFORMATION

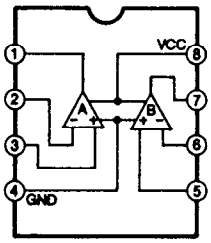
IC 2501 AN3621NK



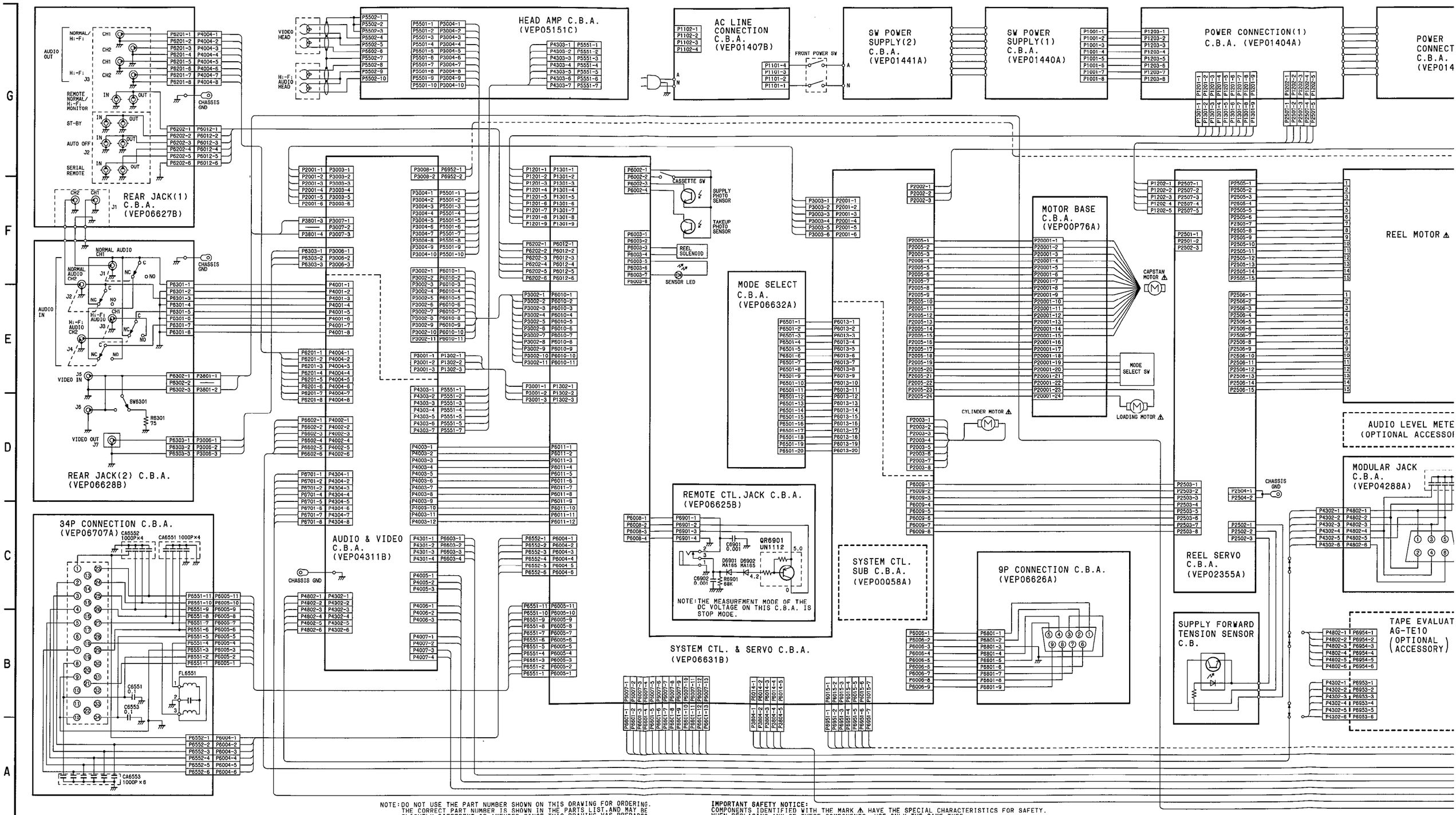
IC2503, 2504 AN3834K



IC2506 LM358P



INTERCONNECTION



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SAME TYPE.

HEAD AMP C.B.A.
(VEP05151C)

AC LINE CONNECTION C.B.A.
(VEP01407B)

FRONT POWER SW

SW POWER SUPPLY(2) C.B.A.
(VEP01441A)

SW POWER SUPPLY(1) C.B.A.
(VEP01440A)

POWER CONNECTION(1) C.B.A. (VEP01404A)

POWER CONNECTION(2) C.B.A.
(VEP01405A)

FRONT(1) C.B.A.
(VEP06621A)

TAPE RUN
RECORD
EJECT/ AUTO OFF
AGC
Hi-Fi
LIMIT
DOLBY

SW1
EJECT SW

HOUR METER
5000H

NORMAL
CH1
CH2
Hi-Fi

REF NO.6600 SERIES

ID DUMMY C.B.A.
(VEP00Q72A)

CASSETTE SW
SUPPLY PHOTO SENSOR
TAKEUP PHOTO SENSOR
REEL SOLENOID
SENSOR LED

MODE SELECT C.B.A.
(VEP06632A)

MOTOR BASE C.B.A.
(VEP00P76A)

CAPSTAN MOTOR ⚠
MODE SELECT SW
CYLINDER MOTOR ⚠
LOADING MOTOR ⚠

REEL MOTOR ⚠

AUDIO LEVEL METER
(OPTIONAL ACCESSORY)

A/C HEAD C.B.

CH1 NORMAL AUDIO HEAD
CH2 NORMAL AUDIO HEAD
NORMAL AUDIO ERASE HEAD
CONTROL HEAD
FULL ERASE HEAD

REMOTE CTL.JACK C.B.A.
(VEP06625B)

QR6901
UN1112

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS C.B.A. IS STOP MODE.

SYSTEM CTL. SUB C.B.A.
(VEP00Q58A)

SYSTEM CTL. & SERVO C.B.A.
(VEP06631B)

9P CONNECTION C.B.A.
(VEP06626A)

REEL SERVO C.B.A.
(VEP02355A)

CHASSIS GND

MODULAR JACK C.B.A.
(VEP04288A)

C48O1
1000P×6

P4801

SUPPLY FORWARD TENSION SENSOR C.B.

TAPE EVALUATOR AG-TE10
(OPTIONAL ACCESSORY)

FRONT(2) C.B.A.
(VEP06622A)

CHECK PIN
VIDEO RF
HD CH1 ENV
HD CH2 ENV
PG
GND
DOP

ID CODER C.B.A.
AG-ID10
(OPTIONAL ACCESSORY)

SW6701
ID PRESET

SW6702
SW6703
SW6704
SW6705
DATA(-)
DATA(+)
SHIFT
SET

REF NO.6700 SERIES

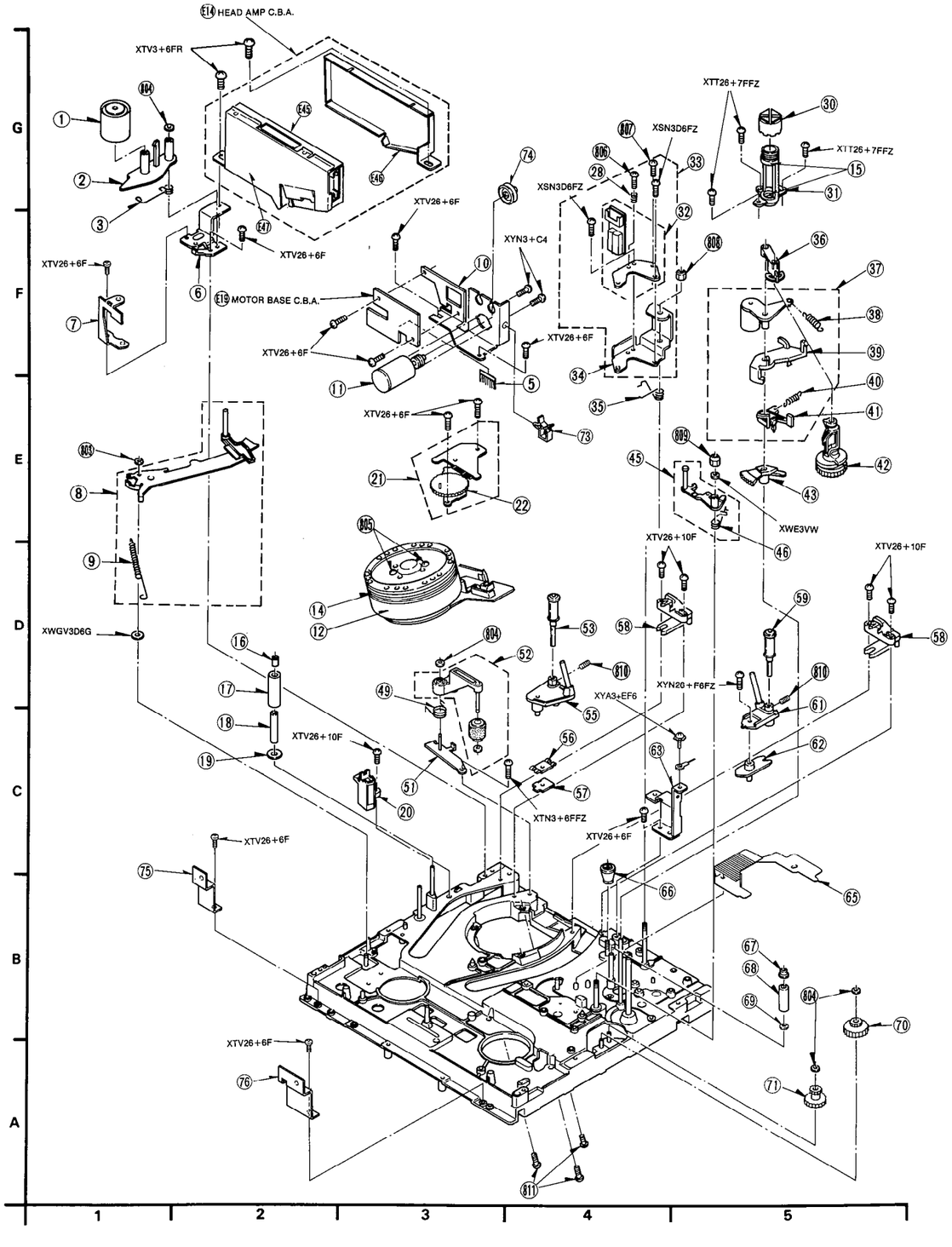
ER SHOWN ON THIS DRAWING FOR ORDERING.
IS SHOWN IN THE PARTS LIST.AND MAY BE
ENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

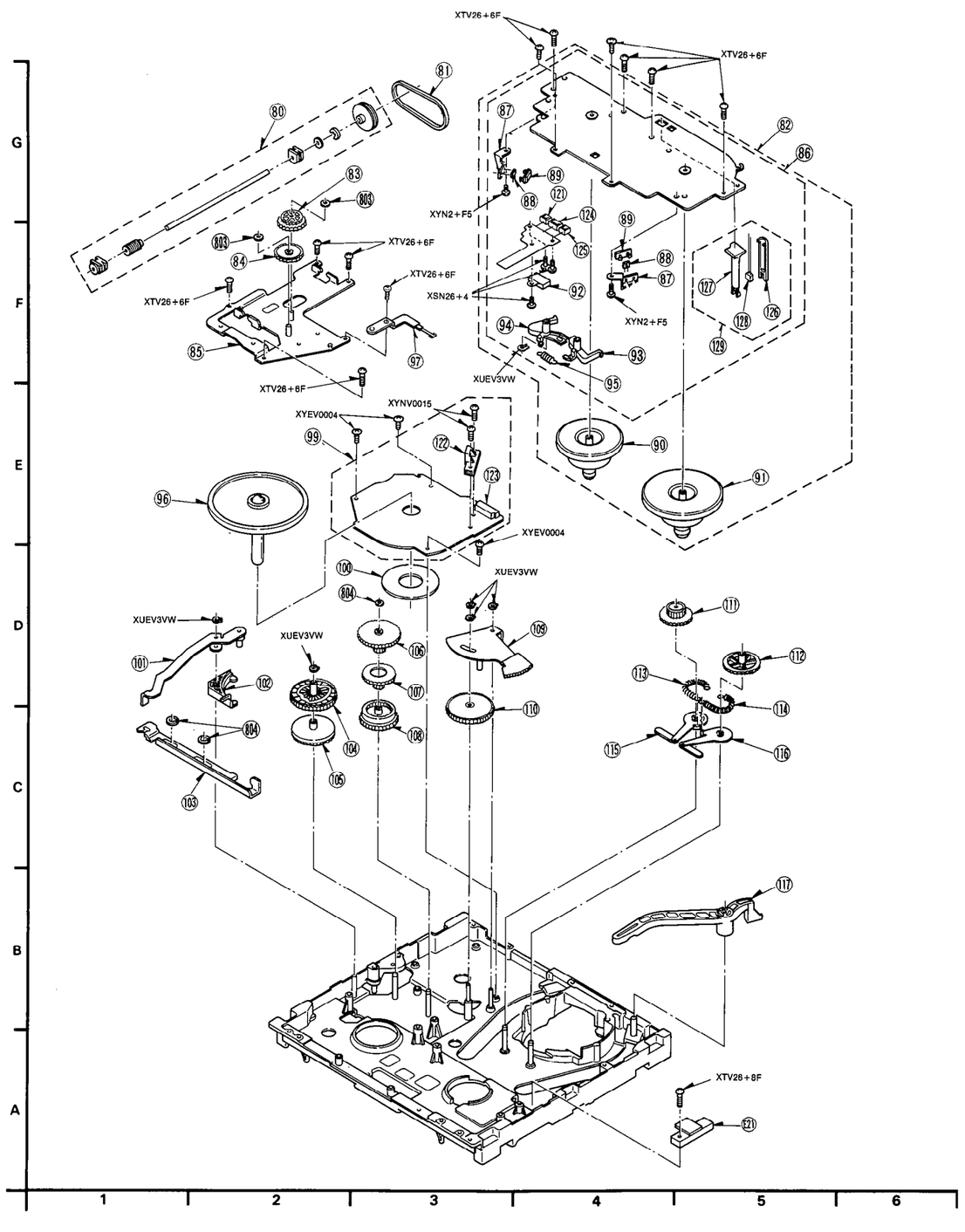
5 6 7 8 9 10 11 12 13 14 15 16 17

EXPLODED VIEWS

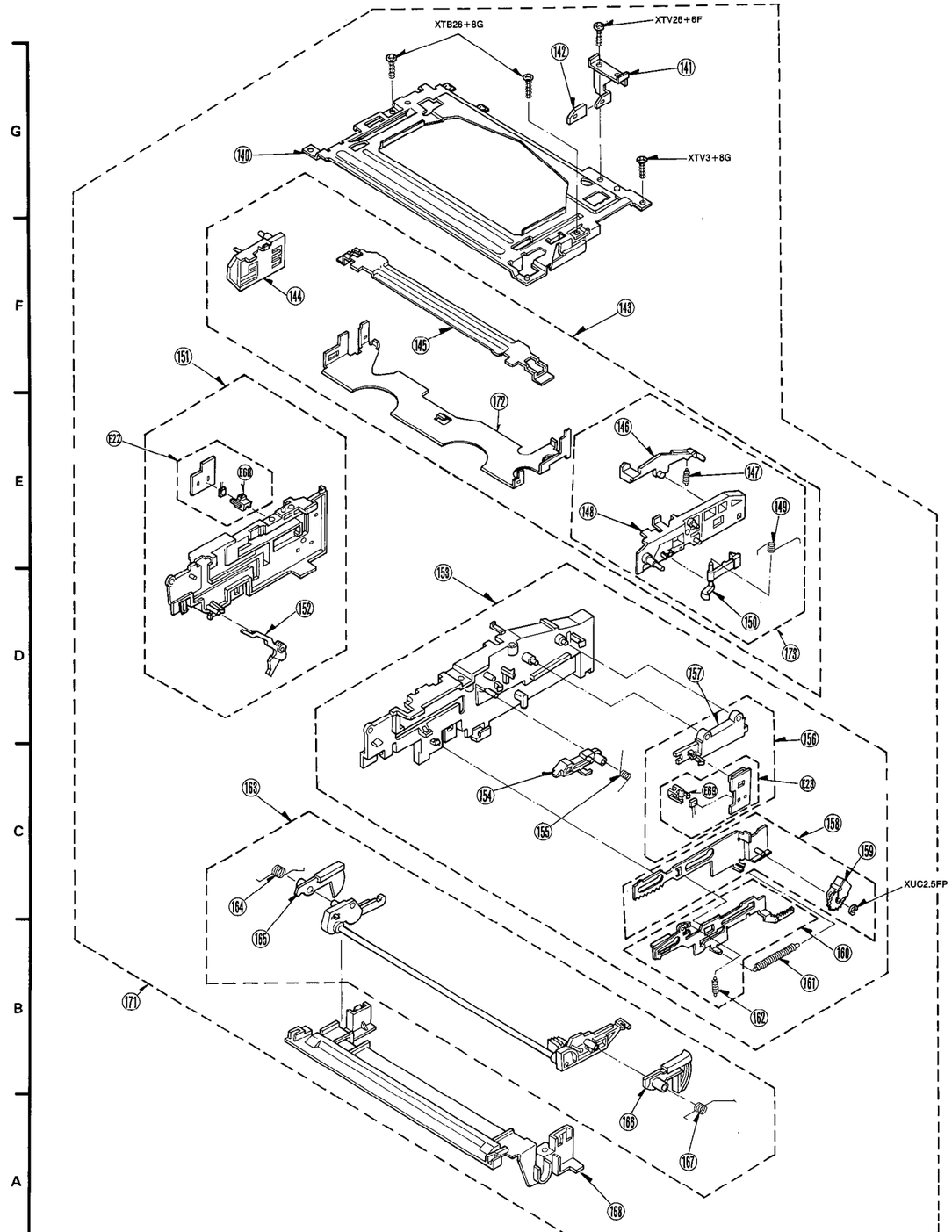
❶ *Chassis Parts Section*



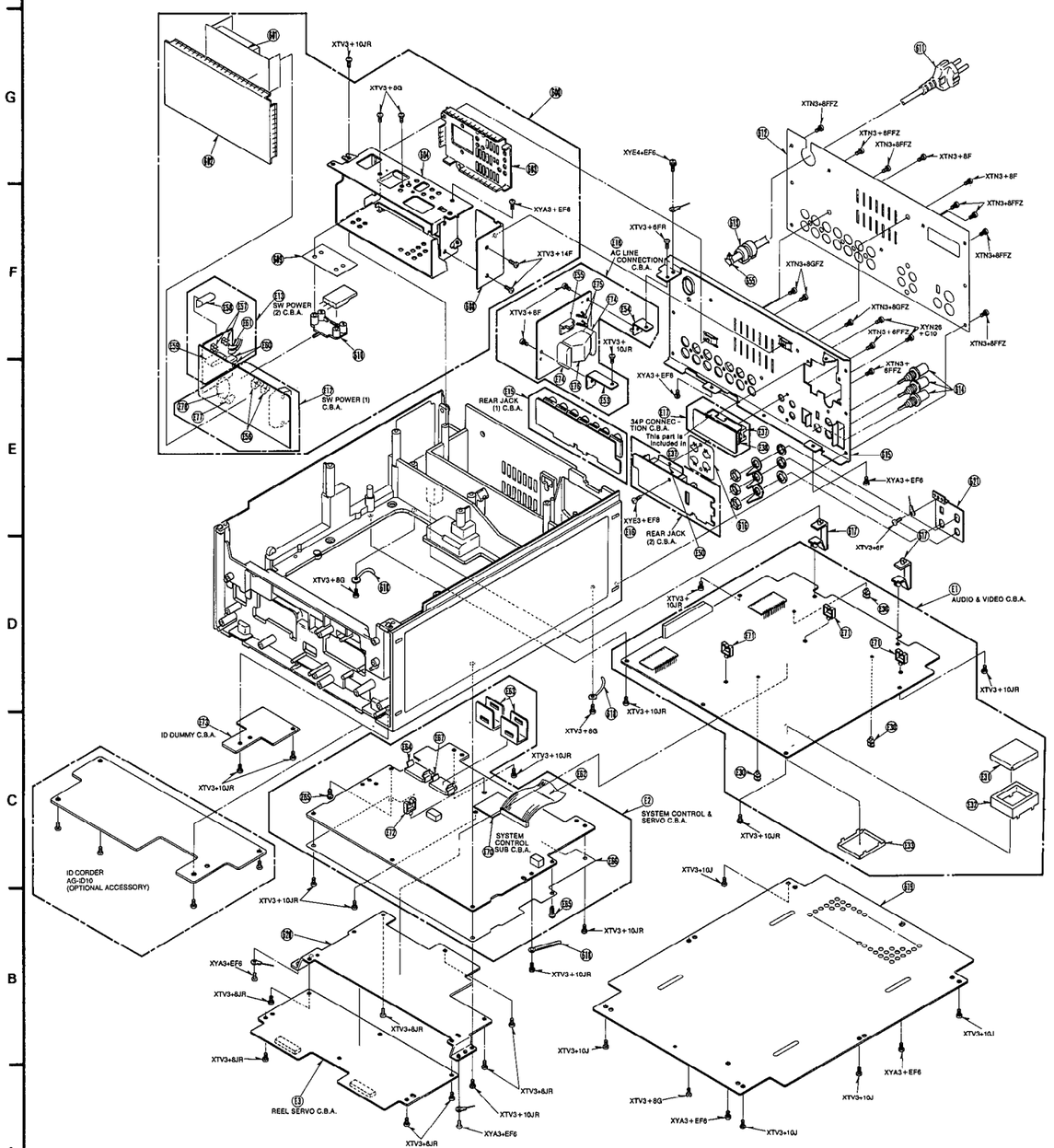
❷ *Moving Mechanism Section*



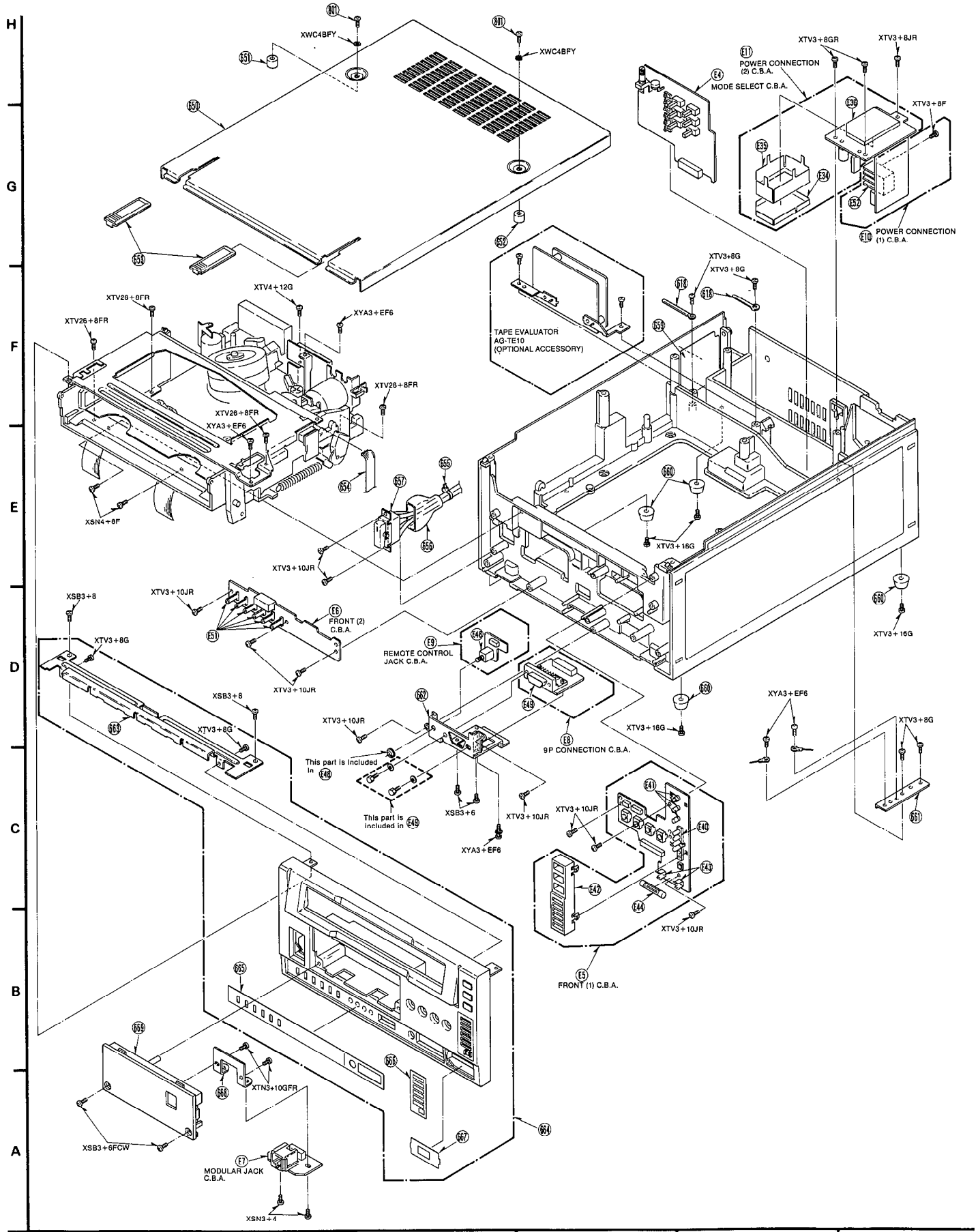
❸ Cassette Compartment Section



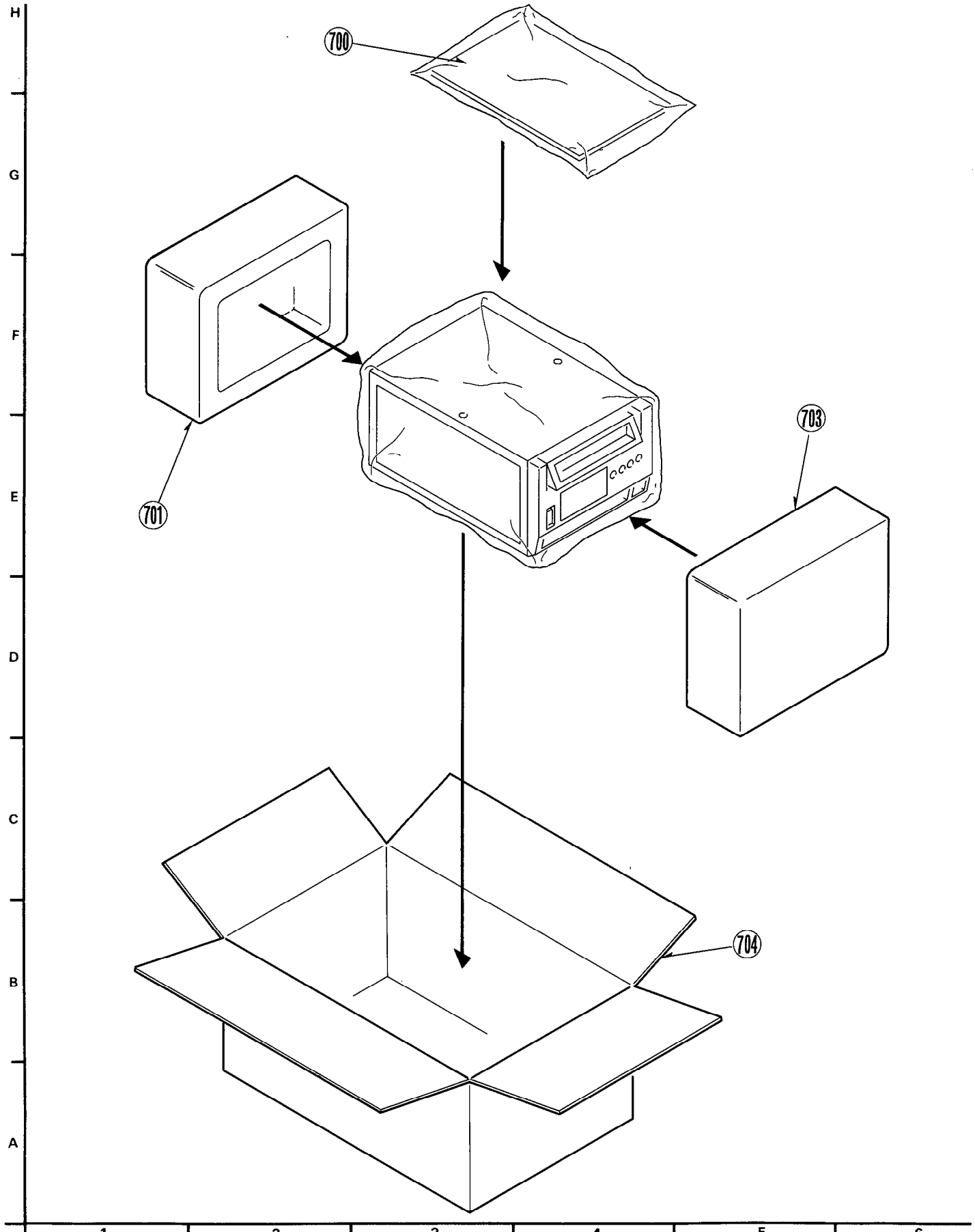
❹ Chassis Parts Section



❺ *Casing Parts Section*



6 *Packing Parts Section*



REPLACEMENT PARTS LIST

Notes:

1. • Be sure to make your orders of replacement parts according to this list.
   • "<R>" in Remark column indicates recommended parts.
   • "<M>" in Remark column indicates needed in the periodical maintenance.
2. IMPORTANT SAFETY NOTICE
   Components identified by " ! " have special characteristics important for safety.
   When replacing any of these components, use only the original ones.
   Meaning of symbol ! on this parts list is exactly the same as symbol ⚠ on Schematic and Circuit Board Diagrams.
3. Unless otherwise specified;
   All resistors are in OHMS (Ω), K=1,000Ω, M=1,000KΩ.
4. ITEM NUMBERS WITH CAPITAL LETTER E
   Item numbers with capital letter E (Example: E1, E2,...) in Ref. No. column mean that the parts are listed with the E item numbers in the exploded views.
5. The main assembled parts are shown below C.B.A. marked with "■".
6. When ordering parts, use part No. only from Part No. column.
7. Printed circuit board assembly with mark (NLA) is no longer available after discontinuation of the product.

1. SERVICING FIXTURES & TOOLS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFM8180HMDH	VHS ALIGNMENT TAPE	1	
		VFK0329	POST ADJ. SCREWDRIVER	1	
		VFK0132	BACK TENSION METER	1	(T2-H7-UM)
			(TENTELOMETER,		
			MADE IN U.S.A.)		
		VFK0191	POST ADJ. PLATE	1	
		VFK0133	DIAL TORQUE GAUGE	1	
		VFK0180	PLASTIC CLAMPER ONLY	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0328	H-POSITION ADJ. FIXTURE	1	
		VFK0330	FINE ADJ. SCREWDRIVER	1	
			(3mm PHI)		
		VFK0335	RETAINING RING REMOVER	1	
		VFK0326	HEX.WRENCH SET	1	
		VFK0343	CHECK LIGHT	1	
		MOR265	MOLYTONE GREASE	1	
		VFK27	HEAD CLEANING STICK	1	
		VFK0344	POST HEIGHT ADJ. FIXTURE	1	
		VFK0269	L TYPE SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	

2. MECHANICAL REPLACEMENT PARTS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VXP1075	IMPEDANCE ROLLER UNIT	1	
2(1)		VML2293	IMPEDANCE ROLLER ARM UNIT	1	
3(1)		VMB1976	IMPEDANCE SPRING	1	
5(1)		VWJ0365	FLEXIBLE WIRE	1	
6(1)		VMA7982	HEAD AMP ANGLE (L)	1	
7(1)		VMA8095	IMPEDANCE ROLLER SUPPORT	1	
			ANGLE		
8(1)		VXL1888	TENSION ARM UNIT	1	
9(1)		VMB1975	TENSION SPRING	1	
10(1)		VMA7986	MOTOR BASE	1	
11(1)		VEM0360	LOADING MOTOR UNIT	1	<R><M>
12(1)		VEG0803	LOWER CYLINDER UNIT	1	<R><M>
14(1)		VEH0489	UPPER CYLINDER UNIT	1	<R><M>
15(1)		VMX1033	OIL SEAL	2	
16(1)		VMX1088	UPPER LIMITER	1	
17(1)		VDP1276	SUPPLY ROLLER	1	
18(1)		VMX1581	P1 COLLAR	1	
19(1)		VMX1794	LOWER LIMITER	1	
20(1)		VBS0038	FE HEAD	1	<R><M>
21(1)		VEK4171	MECH CONNECTION UNIT	1	
22(1)		VSS0257	MODE SW	1	<R><M>
28(1)		VMB1251	ADJUST SPRING	1	
30(1)		VXQ0006	THRUST SCREW UNIT	1	
31(1)		VXD0101	HOUSING UNIT	1	
32(1)		VED0127	A/C HEAD (1) UNIT	1	
33(1)		VED0138	A/C HEAD UNIT	1	
34(1)		VXA3649	A/C HEAD BASE UNIT	1	
35(1)		VMB1567	A/C HEIGHT SPRING	1	
36(1)		VMX1353	PINCH CAM CAP	1	
37(1)		VXL1902	PRESSURE ROLLER UNIT	1	<R><M>
38(1)		VMB1977	PINCH PRESSURE SPRING	1	
39(1)		VML1873	PINCH PRESSURE ARM	1	
40(1)		VMB1569	PINCH ARM SPRING	1	
41(1)		VML1874	PINCH LIFT ARM	1	
42(1)		VDG0577	PINCH CAM	1	
43(1)		VDG0651	PULL OUT SECTOR GEAR	1	
45(1)		VXL1485	P5 UNIT	1	
46(1)		VMB1554	P5 SPRING	1	
48(1)		VXL1744	HEAD CLEANING ARM (1) UNIT	1	
49(1)		VMB1996	CLEANING SPRING	1	
50(1)		VXP1168	HEAD CLEANING PAD UNIT	1	<R><M>
51(1)		VXA3980	HEAD CLEANING PLATE UNIT	1	
52(1)		VXL1987	HEAD CLEANING UNIT	1	
53(1)		VXP1093	ROLLER POST (S) UNIT	1	
55(1)		VXA3249	INCLIND BASE (S) (2) UNIT	1	<R><M>
56(1)		VMA7029	HOLDER PLATE (S)	1	
57(1)		VMA7660	PLATE	1	
58(1)		VMD0910	POST STOPPER	2	
59(1)		VXP1094	ROLLER POST (T) UNIT	1	
61(1)		VXA3213	INCLIND BASE (T) (1) UNIT	1	<R><M>
62(1)		VXA2687	INCLIND ADJUSTMENT PLATE U	1	
63(1)		VMA7983	HEAD AMP ANGLE (R)	1	
65(1)		VXA3871	SHIELD PLATE UNIT	1	
66(1)		VHN0110	ADJUST NUT	1	
67(1)		VMX1544	P4 UPPER LIMITER	1	
68(1)		VMX1568	P4 SLEEVE	1	
69(1)		VMX1795	P4 LOWER LIMITER	1	
70(1)		VDG0332	CONNECTION GEAR	1	
71(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
73(1)		VJF0013	MINI CLAMPER	1	
74(1)		VDP1319	MOTOR PULLEY	1	
75(1)		VMA6895	MOUNT PLATE (L)	1	
76(1)		VMA6896	MOUNT PLATE (R)	1	
80(2)		VXP1082	WORM SHAFT UNIT	1	<R><M>
81(2)		VDV0215	LOADING BELT	1	<R><M>
82(2)		VEM0378	REEL MOTOR UNIT	1	
83(2)		VDG0581	WORM WHEEL	1	<R><M>
84(2)		VDG0582	INTERMEDIATE GEAR	1	
85(2)		VXA3646	GEAR BASE (1) UNIT	1	
86(2)		VXA3647	STATOR BASE UNIT	1	
87(2)		VMD0611	FG SUPPORT (1)	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
88(2)		HW-300B	HOLE IC	2	<R>
89(2)		VMD0621	FG SUPPORT (2)	2	
90(2)		VXR0187	TAKEUP REEL TABLE UNIT	1	
91(2)		VXR0186	SUPPLY REEL TABLE UNIT	1	
92(2)		VSJ0066	SOLENOID	1	
93(2)		VXZ0270	MAIN BRAKE (S) UNIT	1	<R><M>
94(2)		VXZ0271	MAIN BRAKE (T) UNIT	1	<R><M>
95(2)		VMB1978	BRAKE SPRING	1	
96(2)		VXP1088	ROTOR UNIT	1	<R><M>
97(2)		VXS0098	EARTH ANGLE UNIT	1	
99(2)		VEK4097	STATOR UNIT	1	<R><M>
100(2)		VMA6847	SUB PLATE	1	
101(2)		VXL1895	CAM FOLLOWER ARM UNIT	1	
102(2)		VML1861	DETENT ARM	1	
103(2)		VMM0218	MAIN ROD	1	
104(2)		VDG0578	MAIN CAM GEAR	1	<R><M>
105(2)		VDG0343	SUB CAM GEAR	1	
106(2)		VDG0580	CENTER GEAR	1	
107(2)		VXP0878	RETAINER GEAR UNIT	1	
108(2)		VDG0342	RING GEAR	1	
109(2)		VXA3144	SECTOR GEAR UNIT	1	
110(2)		VDG0579	LOADING CAM GEAR	1	<R><M>
111(2)		VDG0420	LOADING GEAR (T)	1	
112(2)		VDG0593	LOADING GEAR (S)	1	
113(2)		VMB1555	LOADING SPRING (T)	1	
114(2)		VMB1746	LOADING SPRING (S)	1	
115(2)		VXL1489	LOADING ARM (T) (1) UNIT	1	
116(2)		VXL1487	LOADING ARM (S) (1) UNIT	1	
117(2)		VML2304	CLEANING ROD	1	
121(2)		VJP1229R	CONNECTOR (2P)	1	
122(2)		VBK0048	MR HEAD	1	
123(2)		VJS2507	CONNECTOR (15P)	1	
124(2)		VJP1235T	CONNECTOR (8P)	1	
125(2)		VJP1229T	CONNECTOR (2P)	1	
126(2)		VMX0683	LED HOLDER (L)	1	
127(2)		VMX1565	LED HOLDER (A)	1	
128(2)		GL450	LED	1	<R>
129(2)		VEK4164	LED UNIT	1	
140(3)		VMA8166	TOP PLATE	1	
141(3)		VMA7992	CASSETTE HOLDER ANGLE	1	
142(3)		VMD1384	CASSETTE HOLDER CAP	1	
143(3)		VXA3690	CASSETTE HOLDER UNIT	1	
144(3)		VMD1387	HOLDER GUIDE (L)	1	
145(3)		VXA3691	HOLDER ANGLE UNIT	1	
146(3)		VML1882	DOOR OPEN LEVER	1	
147(3)		VMB1584	DOOR OPEN LEVER SPRING	1	
148(3)		VMD1386	HOLDER GUIDE (R)	1	
149(3)		VMB2063	RELEASE SPRING	1	
150(3)		VML2306	RELEASE LEVER	1	
151(3)		VXA3694	SIDE PLATE (L) UNIT	1	
152(3)		VML2305	OPENER LEVER	1	
153(3)		VXA3693	SIDE PLATE (R) UNIT	1	
154(3)		VML2288	DOWN SUPPORT LEVER	1	
155(3)		VMB1961	DOWN SUPPORT SPRING	1	
156(3)		VXA3498	SLIDE SW UNIT	1	
157(3)		VSS0258	SLIDE SW	1	<R>
158(3)		VXA3696	MAIN RACK UNIT	1	
159(3)		VDG0737	DAMPER	1	
160(3)		VXA3697	SUB RACK UNIT	1	
161(3)		VMB1997	CLUTCH SPRING	1	
162(3)		VMB1780	RACK C SPRING	1	
163(3)		VXP1089	MAIN SHAFT UNIT	1	
164(3)		VMB1999	SUB WIPER SPRING (L)	1	
165(3)		VML1878	SUB WIPER ARM (L)	1	
166(3)		VML1879	SUB WIPER ARM (R)	1	
167(3)		VMB1998	SUB WIPER SPRING (R)	1	
168(3)		VMA7988	CASSETTE GUIDE	1	
171(3)		VXA3975	CASSETTE COMPARTMENT UNIT	1	
172(3)		VMA7989	CASSETTE HOLDER	1	
173(3)		VXA3692	HOLDER GUIDE (R) UNIT	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
600(4)		VEK4982	POWER SUPPLY UNIT	1	
601(4)		VMZ1440	INSULATION SHEET (A)	1	
602(4)		VSC2237	POWER SHIELD CASE (BOTTOM)	1	
603(4)		VSC2235	POWER SHIELD CASE (TOP)	1	
604(4)		VXA3571	POWER SHIELD CASE (MAIN)	1	
608(4)		VSC2238	L TYPE HEAT SINK	1	
609(4)		VMZ1224	INSULATION SHEET (B)	1	
610(4)		VGQ1377	TR HOLDER	1	
611(4)		VJA0569	AC CORD	1	AG-6850H-E ONLY
611(4)		VJA0570	AC CORD	1	AG-6850H-A ONLY
611(4)		VJA0571	AC CORD	1	AG-6850H-B ONLY
612(4)		VGH2485	JACK NAME PLATE	1	
613(4)		VMX0936	BUSHING	1	
614(4)		VDB0293	BNC JACK	3	
615(4)		VJH0604	JACK PANEL	1	
616(4)		VMP2680	JACK EARTH ANGLE	1	
617(4)		VKC0129	HINGE CLIP	2	
618(4,5)		VJR3	CLAMPER	5	
619(4)		VKU0332	BOTTOM PLATE	1	<R>
620(4)		VMP2643	BOARD SUPPORT ANGLE	1	
621(4)		VMP2833	JACK EARTH ANGLE	1	
650(5)		VGM0615	TOP PANEL	1	<R>
651(5)		VMX0871	TOP SPACER (B)	1	
652(5)		VMX1789	TOP SPACER (A)	1	
653(5)		VGQ1313	TOP CAP	2	
654(5)		VWJ04CN280CC	FLEXIBLE WIRE	1	
655(4,5)		VJF0215	BINDER	2	
656(5)		VMZ0580	SWITCH COVER	1	<R>
657(5)		VSW0031	POWER SWITCH	1	<R><!>
659(5)		VMZ1570	INSULATION SHEET	1	
660(5)		VMG0404	RUBBER FOOT	4	
661(5)		VMA8159	EARTH ANGLE	1	
662(5)		VMP2641	9P CONNECTOR ANGLE	1	
663(5)		VMP2640	FRONT PANEL SUPPORT ANGLE	1	
664(5)		VYP3333	FRONT PANEL UNIT	1	<R>
665(5)		VGH2304	FRONT NAME PLATE (B)	1	<R>
666(5)		VGH2303	FRONT NAME PLATE (A)	1	<R>
667(5)		VGH2305	HOUR METER COVER	1	<R>
668(5)		VMP2663	METER CONNECTOR ANGLE	1	
669(5)		VGP2495	METER COVER	1	<R>
700(6)		VQT3737	OPERATING INSTRUCTIONS	1	AG-6850H-E/B/A <R><!>
			(ENGLISH)		
700(6)		VQT3738	OPERATING INSTRUCTIONS	1	AG-6850H-E ONLY<R><!>
			(GERMAN, FRENCH)		
701(6)		VPN2704	CUSHION (B)	1	
703(6)		VPN2703	CUSHION (A)	1	
704(6)		VPG5472	PACKING CASE	1	AG-6850H-E ONLY <R>
704(6)		VPG5473	PACKING CASE	1	AG-6850H-B ONLY <R>
704(6)		VPG5474	PACKING CASE	1	AG-6850H-A ONLY <R>
801(5)		VHD0222	SCREW	2	
803(1,2)		VMX0653	CUT WASHER	3	
804(1,2)		VMX1079	CUT WASHER	8	
805(1)		VHD0425	SCREW	2	
806(1)		VHD0322	ADJUST SCREW	1	
807(1)		VHD0089B	AZIMUTH SCREW	1	
808(1)		VHN0063	M4 NYLON NUT	1	
809(1)		VHN0023	M3 NYLON NUT	1	
810(1)		XXEV0004	SCREW	2	
811(1)		VHD0342	SCREW	3	

3. ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E1		VEP04311B	AUDIO & VIDEO C.B.A.	1	(NLA)<R>
E2		VEP06631B	SYSTEM CTL. & SERVO C.B.A.	1	(NLA)<R>
					INCLUDING THE
					SUB SYSTEM CTL.
					C.B.A. (VEP00Q58A)
E70		VEP00Q58A	SUB SYSTEM CTL. C.B.A.	1	(NLA)<R>
					PARTS LIST IS
					INCLUDED IN SYSTEM
					CTL. & SERVO C.B.A.
					(VEP06631B)
E3		VEP02355A	REEL SERVO C.B.A.	1	(NLA)<R>
E4		VEP06632A	MODE SELECT C.B.A.	1	(NLA)<R>
E5		VEP06621A	FRONT (1) C.B.A.	1	(NLA)<R>
E6		VEP06622A	FRONT (2) C.B.A.	1	(NLA)<R>
E7		VEP04288B	MODULAR JACK C.B.A.	1	(NLA)<R>
E8		VEP06626A	9P CONNECTION C.B.A.	1	(NLA)<R>
E9		VEP06625B	REMOTE CONTROL JACK C.B.A.	1	(NLA)<R>
E10		VEP01404A	POWER CONNECTION (1) C.B.A.	1	(NLA)<R>
E11		VEP01405A	POWER CONNECTION (2) C.B.A.	1	(NLA)<R>
E12		VEP01440A	SW POEWR (1) C.B.A.	1	(NLA)<R>
E13		VEP01441A	SW POWER (2) C.B.A.	1	(NLA)<R>
E14		VEP05151C	HEAD AMP C.B.A.	1	(NLA)<R>
E15		VEP06627B	REAR JACK (1) C.B.A.	1	(NLA)<R>
E16		VEP06628B	REAR JACK (2) C.B.A.	1	(NLA)<R>
E17		VEP06630B	34P CONNECTION C.B.A.	1	(NLA)<R>
E18		VEP01407B	AC LINE CONNECTION C.B.A.	1	(NLA)<R>
E19		VEP00P76A	MOTOR BASE C.B.A.	1	(NLA)<R>
E21		VEK2657	TENSION DETECTOR C.B.A.	1	(NLA)<R>
E22		VEK3578	PHOTO TR. (L) UNIT	1	(NLA)<R>
E23		VEK4058	PHOTO TR.(R) UNIT	1	(NLA)<R>
E73		VEP00Q72A	ID DUMMY C.B.A.	1	(NLA)<R>
	■	VEP04311B	AUDIO & VIDEO C.B.A.		
C3001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3002		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3003		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3004		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3005		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3006,07		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3009		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3011		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3012		ECEA1CK100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3013		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3014		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3015		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3016		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3017		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C3018		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3019		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3020,21		ECEA0JK220	E.CAPACITOR 6.3V 22U	2	
C3022		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3023		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C3024		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3025		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3026		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C3027		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C3028		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3029		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3030		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3031		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3032		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3033		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3034		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3036		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3037,38		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C3039		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3040		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C3041		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3042		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C3043,44		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3045		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3046		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3047-50		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C3051		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3052,53		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3054		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3055		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C3056		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3057		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3058-63		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C3065		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C3066		ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	1	
C3067		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3068		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3069		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C3070		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3071		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C3072,73		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C3074		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3075		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3076		ECEA0JKN470	E.CAPACITOR 6.3V 47U	1	
C3077		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3078		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C3079,80		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C3081		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3082		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3083		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3085		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3086		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3087		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3088		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3089		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3090		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3091		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3092		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3093		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3094		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C3096		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3097		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3098		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3099		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3100		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3101		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3102		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3103		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3104,05		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3107		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3108	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3109	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3113	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3116	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3117	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3118	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C3119	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3120	ECUM1H050DCN	C.CAPACITOR CH 50V 50P	1	
C3121	ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C3122	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3123	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3124	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3125	ECEA1HFS4R7	E.CAPACITOR 50V 4.7U	1	
C3126,27	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3128	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3129	ECEA1CU221	E.CAPACITOR 16V 220U	1	
C3130	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3131	ECEA0JU102	E.CAPACITOR 6.3V 1000U	1	
C3132	ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C3133	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3134	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3135	ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C3136	ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C3137	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3138	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3139	ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C3142	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3143	ECEA0JKN220	E.CAPACITOR 6.3V 22U	1	
C3144	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3145	ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C3146	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3147	ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C3148	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3149	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3150	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3151	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3152,53	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3154	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4001-04	VCEA1CAC100	E.CAPACITOR 16V 10U	4	
C4005	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4006	VCEA1CAC330J	E.CAPACITOR 16V 33U	1	
C4007	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4008,09	VCEA1CAC330J	E.CAPACITOR 16V 33U	2	
C4010,11	ECEA1CK470	E.CAPACITOR 16V 47U	2	
C4012	VCEA1CAC330J	E.CAPACITOR 16V 33U	1	
C4013	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4014	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4016	ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C4017	ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4018	VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4019	ECQB1H182JH	P.CAPACITOR 50V 1800P	1	
C4020	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4021	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4022	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4023	ECEA50M1	E.CAPACITOR 50V 1U	1	
C4024	VCEA0JAC101J	E.CAPACITOR 6.3V 100U	1	
C4025	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4026	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4027	VCEA1CAC470	E.CAPACITOR 16V 47U	1	
C4028	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4029	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4030	VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4031	ECEA50ZR68	E.CAPACITOR 50V 0.68U	1	
C4032	VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4033	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4034	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4035	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4036	ECEA1CU221	E.CAPACITOR 16V 220U	1	
C4037	ECEA50ZR68	E.CAPACITOR 50V 0.68U	1	
C4038	VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4039	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4040	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4041	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4042	VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4043,44	ECEA1CK470	E.CAPACITOR 16V 47U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4045-48	VCEA1CAC100	E.CAPACITOR 16V 10U	4	
C4049	VCEA1HAC4R7J	E.CAPACITOR 50V 4.7U	1	
C4050	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4051	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4052	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4053	ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C4054	VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4055	ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4056	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4057	ECQB1H182JH	P.CAPACITOR 50V 1800P	1	
C4058	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4059	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4060	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4061	ECEA50M1	E.CAPACITOR 50V 1U	1	
C4062	VCEA0JAC101J	E.CAPACITOR 6.3V 100U	1	
C4063	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4064	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4065	ECEA1CU221	E.CAPACITOR 16V 220U	1	
C4066	VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4068	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4069	ECQM1H332JV	P.CAPACITOR 50V 3300P	1	
C4070	ECQM1H682JV	P.CAPACITOR 50V 6800P	1	
C4071,72	ECCD2H151J	C.CAPACITOR 500V 150P	2	
C4073	ECQF6182KZ	P.CAPACITOR 630V 1800P	1	
C4074	VCEA1HAC4R7J	E.CAPACITOR 50V 4.7U	1	
C4075	VCEA1CAC470	E.CAPACITOR 16V 47U	1	
C4115	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4302,03	VCEA1HAC4R7J	E.CAPACITOR 50V 4.7U	2	
C4304	VCEA1CAC220	E.CAPACITOR 16V 22U	1	
C4305	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4306	VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4307	VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4308,09	VCEA1HAC010	E.CAPACITOR 50V 1U	2	
C4310,11	VCEA1HAC3R3	E.CAPACITOR 50V 3.3U	2	
C4312	ECEA1CU471	E.CAPACITOR 16V 470U	1	
C4313	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4314	ECQB1H682JH	P.CAPACITOR 50V 6800P	1	
C4315	ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4316	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4317	VCEA1EAC100J	E.CAPACITOR 25V 10U	1	
C4318	VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4319	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4320	VCEA1CAC470	E.CAPACITOR 16V 47U	1	
C4321	ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C4322-24	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	3	
C4325	VCEA1HAD3R3J	E.CAPACITOR 50V 3.3U	1	
C4326	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4327,28	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4329,30	VCEA1HAD4R7J	E.CAPACITOR 50V 4.7U	2	
C4331	ECQB1H682JH	P.CAPACITOR 50V 6800P	1	
C4332	ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4333	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4334	VCEA1EAC100J	E.CAPACITOR 25V 10U	1	
C4335	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4336	VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4337	VCEA1CAC470	E.CAPACITOR 16V 47U	1	
C4338	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4339	ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C4340,41	ECUM1H122JN	C.CAPACITOR CH 50V 1200P	2	
C4342-44	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	3	
C4345	VCEA1HAD3R3J	E.CAPACITOR 50V 3.3U	1	
C4346	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4347-49	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4350,51	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4352	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4353	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4354	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4355	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C4356	VCEA1HAC010	E.CAPACITOR 50V 1U	1	
C4357	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4358	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4359,60	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4361,62	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C4363,64	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4365	ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4366		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4367		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4368		VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4369-71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4372-76		VCEA1CAC100	E.CAPACITOR 16V 10U	5	
C4377		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4378		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
D3001		MA4091	DIODE	1	<R>
D3002		MA151WK	DIODE	1	<R>
D3003		MA151K	DIODE	1	<R>
D3004		MA723	DIODE	1	<R>
D3005-07		MA151K	DIODE	3	<R>
D3008		MA151WK	DIODE	1	<R>
D3009,10		MA151K	DIODE	2	<R>
D4001,02		MA151K	DIODE	2	<R>
D4003		MA151WK	DIODE	1	<R>
D4301,02		MA151WK	DIODE	2	<R>
DL3001		VLD0089	DELAY LINE	1	
DL3002		VLD0147	DELAY LINE	1	
DL3003		VLD0125	DELAY LINE	1	
DL3004		VLD0153	DELAY	1	
FL3001		VLF0727	FILTER	1	
FL3002		VLF0499	FILTER	1	
FL3003		ELB4M022	FILTER	1	
FL3004		VLF0299	FILTER	1	
FL4001,02		VLF0402	FILTER	2	
FL4301		VLF0697	FILTER	1	
IC3001		MSM6965-3RS	IC	1	<R>
IC3002		NJM2233BL	IC	1	<R>
IC3003		VEFH03D	HIC	1	<R>
IC3004		NJM2233BDA	IC	1	<R>
IC3005		AN3495K	IC	1	<R>
IC3006		VEFH04F	IC	1	<R>
IC4001,02		RC4558P	IC	2	<R>
IC4003,04		LA7296	IC	2	<R>
IC4005		CXA1101P	IC	1	<R>
IC4006		MC14066BCP	IC	1	<R>
IC4007		RC4558P	IC	1	<R>
IC4301		BA7700K1	IC	1	<R>
IC4302		BA17805	IC	1	<R>
IC4303,04		RC4558P	IC	2	<R>
JW3002,03		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L3001-03		VLQEL05F101K	COIL 100UH	3	
L3004		VLQEL05F151J	COIL 150UH	1	
L3005		VLQEL05F270J	COIL 27UH	1	
L3006		VLQEL05F121J	COIL 120UH	1	
L3007		VLQEL05F680J	COIL 68UH	1	
L3008		VLQEL05F101K	COIL 100UH	1	
L3009		VLQEL05F101J	COIL 100UH	1	
L3010-12		VLQEL05F101K	COIL 100UH	3	
L3013		VLQEL05F220J	COIL 22UH	1	
L3014,15		VLQEL05F150J	COIL 15UH	2	
L3016		VLQEL05F101K	COIL 100UH	1	
L3017		VLQEL05F270J	COIL 27UH	1	
L3019		VLQEL05F6R8J	COIL 6.8U	1	
L3020		VLQEL05R101J	COIL 100UH	1	
L3021		VLQEL05F120J	COIL 12U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L3022,23		VLQEL05F101K	COIL 100UH	2	
L3025		VLQEL05F151J	COIL 150UH	1	
L3029		VLQEL05R820J	COIL 82UH	1	
L3030,31		VLQEL05F101K	COIL 100UH	2	
L3032		VLQEL05F470J	COIL 47UH	1	
L3033,34		VLQEL05F101K	COIL 100UH	2	
L3035,36		VLQEL05F681J	COIL 680UH	2	
L3037		VLQEL05F391J	COIL 390UH	1	
L3039		VLQEL05F470J	COIL 47UH	1	
L3040,41		VLQEL05F101K	COIL 100UH	2	
L4001,02		VLQEL07F153J	COIL 15MH	2	
L4003,04		VLQEL05F101K	COIL 100UH	2	
L4005		VLQEL05F102K	COIL 1000UH	1	
L4301-05		VLQEL05F101K	COIL 100UH	5	
L4306		VLQEL05F121K	COIL 120UH	1	
L4307		VLQEL05F101K	COIL 100UH	1	
P3001		VJP1230B	CONNECTOR(MALE) 3P	1	
P3002		VJP1511T	CONNECTOR(MALE) 11P	1	
P3003		VJP1233G	CONNECTOR(MALE) 6P	1	
P3004		VJP1237R	CONNECTOR(MALE) 10P	1	
P3006		VJP1230G	CONNECTOR(MALE) 3P	1	
P3007		VJP1230R	CONNECTOR(MALE) 3P	1	
P3008		VJP1229T	CONNECTOR(MALE) 2P	1	
P4001		VJP1235T	CONNECTOR(MALE) 8P	1	
P4002		VJP1233T	CONNECTOR(MALE) 6P	1	
P4003		VJP1239T	CONNECTOR(MALE) 12P	1	
P4004		VJP1235T	CONNECTOR(MALE) 8P	1	
P4005		VJP1230T	CONNECTOR(MALE) 3P	1	
P4006		VJP1230R	CONNECTOR(MALE) 3P	1	
P4007		VJP1231T	CONNECTOR(MALE) 4P	1	
P4301		VJP1231T	CONNECTOR(MALE) 4P	1	
P4302		VJP1233T	CONNECTOR(MALE) 6P	1	
P4303		VJP1234T	CONNECTOR(MALE) 7P	1	
P4304		VJP1235R	CONNECTOR(MALE) 8P	1	
Q3001		MSC2295	TRANSISTOR	1	<R>
Q3002		MSD601	TRANSISTOR	1	<R>
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Q3004,05		MSD601	TRANSISTOR	2	<R>
Q3006		MSB709	TRANSISTOR	1	<R>
Q3007		MSC2295	TRANSISTOR	1	<R>
Q3008		MSD601	TRANSISTOR	1	<R>
Q3009		MSC2295	TRANSISTOR	1	<R>
Q3010,11		MSD601	TRANSISTOR	2	<R>
Q3012		MSC2295	TRANSISTOR	1	<R>
Q3013		MSB709	TRANSISTOR	1	<R>
Q3014,15		MSC2295	TRANSISTOR	2	<R>
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Q3017		2SB643	TRANSISTOR	1	<R>
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Q3019		MSD601	TRANSISTOR	1	<R>
Q3020		2SB641	TRANSISTOR	1	<R>
Q3021,22		MSC2295	TRANSISTOR	2	<R>
Q3023,24		MSD601	TRANSISTOR	2	<R>
Q3025,26		MSC2295	TRANSISTOR	2	<R>
Q3027		MSD601	TRANSISTOR	1	<R>
Q4001		MSB709	TRANSISTOR	1	<R>
Q4002,03		2SD1328	TRANSISTOR CHIP	2	<R>
Q4004		2SD973A	TRANSISTOR	1	(R)<R>
Q4302-05		MSD601	TRANSISTOR	4	<R>
Q4306,07		2SD1328	TRANSISTOR CHIP	2	<R>
Q4308,09		MSD601	TRANSISTOR	2	<R>
QR3001		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR3002		MRN1407	TRANSISTOR-RESISTOR	1	<R>
QR3003		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR3004		DTC363EK	TRANSISTOR-RESISTOR	1	<R>
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR3007		MRN2402	TRANSISTOR-RESISTOR	1	<R>
QR3008		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR3011		MRN2404	TRANSISTOR-RESISTOR	1	<R>
QR4001		MRN2402	TRANSISTOR-RESISTOR	1	<R>
QR4002-07		MRN1404	TRANSISTOR-RESISTOR	6	<R>
QR4301		MRN2404	TRANSISTOR-RESISTOR	1	<R>
QR4302,03		MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR4304		MRN2402	TRANSISTOR-RESISTOR	1	<R>
R3001		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3002		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R3003		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R3004		ERJ6GEYJ822	M.RESISTOR CH1/10W 8.2K	1	
R3005		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	1	
R3006		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3007		ERJ6GEYJ561	M.RESISTOR CH1/10W 560	1	
R3008		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3009		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R3010		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3011		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3012		ERJ6GEYJ124	M.RESISTOR CH1/10W 120K	1	
R3013		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R3014,15		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	2	
R3016		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3017,18		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	2	
R3019		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R3020,21		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	2	
R3022		ERJ6GEYJ123	M.RESISTOR CH1/10W 12K	1	
R3024		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R3025		ERJ6GEYJ123	M.RESISTOR CH1/10W 12K	1	
R3026		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3028		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R3029		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R3030		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R3031		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R3032		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R3033		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R3034		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	1	
R3035		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3036,37		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	2	
R3038		ERJ6GEYJ271	M.RESISTOR CH1/10W 270	1	
R3039		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R3040,41		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R3042,43		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	2	
R3044		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3045		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R3046		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R3047		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R3048		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R3049		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3050,51		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R3054		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3055		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R3056		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R3057		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3058		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3059,60		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R3061		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	1	
R3062		ERJ6GEYJ824	M.RESISTOR CH1/10W 820K	1	
R3063,64		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R3065		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R3066		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3067		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3068		ERJ6GEYJ271	M.RESISTOR CH1/10W 270	1	
R3069,70		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R3071		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R3072		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R3073		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3074,75		ERJ6GEYJ561	M.RESISTOR CH1/10W 560	2	
R3076		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R3077		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3078		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3079,80		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3081		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3082		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3084		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R3085,86		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	2	
R3087		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3088		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3089		ERJ6GEYJ331	M.RESISTOR CH1/10W 330	1	
R3091		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3093		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3094		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3095,96		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	2	
R3097		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R3098		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R3100		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R3101		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3102		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3103		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R3104		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R3105		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R3106		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R3107		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3108		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	1	
R3109		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R3110		ERJ6GEYJ182	M.RESISTOR CH1/10W 1.8K	1	
R3111		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3112,13		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R3115		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3116		ERJ6GEYJ750	M.RESISTOR CH1/10W 75	1	
R3117		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3118		ERJ6GEYJ271	M.RESISTOR CH1/10W 270	1	
R3119		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3120		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R3121		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3123		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R3124		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3125		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R3126		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R3127		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R3128		ERJ6GEYG273	M.RESISTOR CH1/10W 27K	1	
R3129		ERJ6GEYG752	M.RESISTOR CH1/10W 7.5K	1	
R3130		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R3131		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	1	
R3132		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R3133		ERJ6GEYG472	M.RESISTOR CH1/10W 4.7K	1	
R3134		ERJ6GEYG152	M.RESISTOR CH1/10W 1.5K	1	
R3135		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R3136		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3138		ERJ6GEYJ271	M.RESISTOR CH1/10W 270	1	
R3139		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R3140		ERJ6GEYJ561	M.RESISTOR CH1/10W 560	1	
R3141		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R3142		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R3143		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R3144		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3145		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R3146		ERJ6GEYJ822	M.RESISTOR CH1/10W 8.2K	1	
R3147		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3148		ERJ6GEYJ561	M.RESISTOR CH1/10W 560	1	
R3149		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	1	
R3150		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3151		ERJ6GEYJ331	M.RESISTOR CH1/10W 330	1	
R3152		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3153		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R3155		ERJ6GEYOR00	M.RESISTOR CH1/10W 0	1	
R3156		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R3157		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R3158		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R4001		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4005-08		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	4	
R4009-12		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	4	
R4013		VRE0034E223	M.RESISTOR CH1/10W 22K	1	
R4014		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R4015		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	1	
R4016		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4017		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4018		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4019		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R4020,21		ERJ6GEYJ121	M.RESISTOR CH1/10W 120	2	
R4022		ERJ6GEYJ334	M.RESISTOR CH1/10W 330K	1	
R4023		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R4024		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R4025		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R4027		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4028		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R4029		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R4030		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R4031		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4032		VRE0034E433	M.RESISTOR CH1/10W 43K	1	
R4033		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R4034		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R4035		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R4036		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R4037		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4038,39		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	2	
R4040		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R4041		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R4042		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4043,44		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R4045		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R4046,47		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4048,49		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	2	
R4050,51		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	2	
R4052,53		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4054		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4055,56		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4057		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4058		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R4059		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R4060		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R4061		VRE0034E223	M.RESISTOR CH1/10W 22K	1	
R4062		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R4063		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4064		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	1	
R4065		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4066		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R4067		ERJ6GEYJ121	M.RESISTOR CH1/10W 120	1	
R4068		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R4069		ERJ6GEYJ121	M.RESISTOR CH1/10W 120	1	
R4070		ERJ6GEYJ334	M.RESISTOR CH1/10W 330K	1	
R4071		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R4072		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R4073		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R4074		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4075		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R4076		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R4077		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R4078		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R4079		ERDS2TJ4R7	C.RESISTOR 1/4W 4.7	1	
R4080		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R4081-87		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	7	
R4092		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R4093,94		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	2	
R4302		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4303,04		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	2	
R4305,06		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4307,08		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	2	
R4309		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4310,11		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	2	
R4312		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R4313,14		ERJ6GEYG821	M.RESISTOR CH1/10W 820	2	
R4315		ERJ6GEYG681	M.RESISTOR CH1/10W 680	1	
R4316		ERJ6GEYG112	M.RESISTOR CH1/10W 1.1K	1	
R4317		ERJ6GEYG103	M.RESISTOR CH1/10W 10K	1	
R4318		ERJ6GEYG183	M.RESISTOR CH1/10W 18K	1	
R4319		ERJ6GEYG562	M.RESISTOR CH1/10W 5.6K	1	
R4320		ERJ6GEYG104	M.RESISTOR CH1/10W 100K	1	
R4321		ERJ6GEYG822	M.RESISTOR CH1/10W 8.2K	1	
R4322		ERJ6GEYG333	M.RESISTOR CH1/10W 33K	1	
R4323		ERJ6GEYG561	M.RESISTOR CH1/10W 560	1	
R4324		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4325		ERJ6GEYG274	M.RESISTOR CH1/10W 270K	1	
R4326,27		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	2	
R4328		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4329,30		ERJ6GEYG821	M.RESISTOR CH1/10W 820	2	
R4331		ERJ6GEYG681	M.RESISTOR CH1/10W 680	1	
R4332		ERJ6GEYG112	M.RESISTOR CH1/10W 1.1K	1	
R4333		ERJ6GEYG103	M.RESISTOR CH1/10W 10K	1	
R4334		ERJ6GEYG183	M.RESISTOR CH1/10W 18K	1	
R4335		ERJ6GEYG562	M.RESISTOR CH1/10W 5.6K	1	
R4336		ERJ6GEYG104	M.RESISTOR CH1/10W 100K	1	
R4337		ERJ6GEYG333	M.RESISTOR CH1/10W 33K	1	
R4338		ERJ6GEYG561	M.RESISTOR CH1/10W 560	1	
R4339		ERJ6GEYG123	M.RESISTOR CH1/10W 12K	1	
R4340		ERJ6GEYG393	M.RESISTOR CH1/10W 39K	1	
R4341		ERJ6GEYG123	M.RESISTOR CH1/10W 12K	1	
R4342		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4343		ERJ6GEYJ334	M.RESISTOR CH1/10W 330K	1	
R4346		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R4347		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R4348		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R4349		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4350		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R4351		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4352-54		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	3	
R4355		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R4356		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R4357		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R4358		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R4359,60		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4361,62		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	2	
R4363		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R4364		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4365		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R4366		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R4367		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R4368		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4369-72		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	4	
R4373,74		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	2	
R4375,76		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R4377,78		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	2	
R4379		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R4380		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R4381		ERJ6GEYJ182	M.RESISTOR CH1/10W 1.8K	1	
R4382,83		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	2	
R4384		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R4385,86		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	2	
T4001		VLT0538	TRANSFORMER	1	<!><R>
VR3001		EVN38CA00B23	V.RESISTOR 2K	1	
VR3003		EVN38CA00B24	V.RESISTOR 20K	1	
VR3004		EVN38CA00B14	V.RESISTOR 10K	1	
VR3005		EVN38CA00B22	V.RESISTOR 200	1	
VR3006,07		EVN38CA00B52	V.RESISTOR 500	2	
VR3008		EVN38CA00B13	V.RESISTOR 1K	1	
VR3009		EVN38CA00B52	V.RESISTOR 500	1	
VR4001-04		EVN38CA00B14	V.RESISTOR 10K	4	
VR4005		EVN38CA00B24	V.RESISTOR 20K	1	
VR4006		EVN38CA00B14	V.RESISTOR 10K	1	
VR4007		EVN38CA00B24	V.RESISTOR 20K	1	
VR4008		EVN38CA00B14	V.RESISTOR 10K	1	
VR4009,10		EVN38CA00B25	V.RESISTOR 200K	2	
VR4301		EVN38CA00B25	V.RESISTOR 200K	1	
VR4302,03		EVN38CA00B22	V.RESISTOR 200	2	
VR4304		EVN38CA00B24	V.RESISTOR 20K	1	
VR4305		EVN38CA00B14	V.RESISTOR 10K	1	
VR4306		EVN38CA00B24	V.RESISTOR 20K	1	
VR4307-09		EVN38CA00B14	V.RESISTOR 10K	3	
VR4310		EVN38CA00B13	V.RESISTOR 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
X3001		VSX0225	CRYSTAL OSCILLATOR.	1	<R>
X3002		VSX0162	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
E30		VKC0295	SPACER	3	
E31		VSC2689	SHIELD CASE (UPPER)	1	FOR AUDIO
E32		VSC2690	SHIELD CASE (MIDDLE)	1	FOR AUDIO
E33		VSC3103	SHIELD CASE (LOWER)	1	FOR AUDIO
E71		VJF0384	CLAMPER	3	
	■	VEP06631B	SYSTEM CTL. & SERVO C.B.A.		INCLUDING THE
					SUB SYSTEM CTL.
					C.B.A. (VEP00Q58A)
C2001		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2002		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2003		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2004		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C2005		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C2006		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C2007		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2008		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2009		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C2010,11		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C2012		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C2013		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2014		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2015		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2016		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2018		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2019		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2020		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2021,22		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C2023		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2024		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2025		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2026		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2027		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2029-37		ECUM1H271JN	C.CAPACITOR CH 50V 270P	9	
C2038		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2039		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2040		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2041		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2042		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2043		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2044		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2045,46		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	2	
C2047,48		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	2	
C2049		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2050		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2051,52		ECEA1HKR33	E.CAPACITOR 50V 0.33U	2	
C2053		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2054		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C2055		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2056		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C2057		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2058-60		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	3	
C2061		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C2062,63		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	2	
C2064		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2065		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2066		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C2067		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C2068		ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C2069-72		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2073-75		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2076-78		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	3	
C2079,80		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C2081,82		ECEA1EK100	E.CAPACITOR 25V 10U	2	
C2083		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2084		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2085		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2086-89		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	4	
C2090,91		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C2092		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2301		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C2302		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C6001,02		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6003		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6004		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6005		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6006		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C6007,08		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C6009		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6010		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C6011,12		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C6013		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C6014		ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
C6017		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6019		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6020		ECEA1EK330	E.CAPACITOR 25V 33U	1	
C6021		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6022		ECEA1EK470	E.CAPACITOR 25V 47U	1	
C6025		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6026		ECEA1CU102	E.CAPACITOR 16V 1000U	1	
C6027		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6028		ECEA0JU102	E.CAPACITOR 6.3V 1000U	1	
D2001,02		MA153	DIODE	2	<R>
D2003		11EQS04	DIODE	1	<R>
D6003		MA153	DIODE	1	<R>
D6004		ERA81004	DIODE	1	<R>
D6005,06		MA151K	DIODE	2	<R>
D6007,08		11ES1	DIODE	2	<R>
IC2001		MN1280R	IC	1	<R>
IC2002		MN6742VCRI	IC	1	<R>
IC2003		AN3726K	IC	1	<R>
IC2004		AN3815K	IC	1	<R>
IC2005		XRA6435S	IC	1	<R>
IC2006		AN78N05	IC	1	<R>
IC2007		AN78L09	IC	1	<R>
IC2008		LM393P	IC	1	<R>
IC2010-12		LM358P	IC	3	<R>
IC2013		UPD65005G373	IC	1	<R>
IC2014		LM393P	IC	1	<R>
IC2301		MC14538BCP	IC	1	<R>
IC6001		MN188166VCM	IC	1	<R>
IC6002		MN1280R	IC	1	<R>
IC6003		M54649L	IC	1	<R>
IC6004		AN6912S	IC	1	<R>
IC6005		BA6250	IC	1	<R>
IC6006-10		AN90B22	IC	5	<R>
IC6012		MC14011BF	IC	1	<R>
L2001		VLQEL05F101K	COIL 100UH	1	
L2002		VLQEL05F470K	COIL 47UH	1	
L2003-06		VLQEL05F221K	COIL 220UH	4	
P1301		VJP1236T	CONNECTOR(MALE) 9P	1	
P1302		VJP1243T	CONNECTOR(MALE) 3P	1	
P2001		VJP1233T	CONNECTOR(MALE) 6P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2002		VJP1874T	CONNECTOR(MALE) 3P	1	
P2003		VJP1879T	CONNECTOR(MALE) 8P	1	
P2005		VJS1444	CONNECTOR(FEMALE) 10P	1	
P6002		VJS2149W	CONNECTOR(FEMALE) 4P	1	
P6003		VJP1235T	CONNECTOR(MALE) 8P	1	
P6004		VJP1246R	CONNECTOR(MALE) 6P	1	
P6005		VJP1251T	CONNECTOR(MALE) 11P	1	
P6008		VJP1231T	CONNECTOR(MALE) 4P	1	
P6009		VJP1235R	CONNECTOR(MALE) 8P	1	
P6010		VJP1511T	CONNECTOR(MALE) 11P	1	
P6011		VJP1252T	CONNECTOR(MALE) 12P	1	
P6012		VJP1246T	CONNECTOR(MALE) 6P	1	
P6013		VJS1410	CONNECTOR(FEMALE) 20P	1	
P6014		VJP1232R	CONNECTOR(MALE) 5P	1	
P6015		VJP1234T	CONNECTOR(MALE) 7P	1	
Q2001		MSC2295	TRANSISTOR	1	<R>
Q2002-05		MSD601	TRANSISTOR	4	<R>
Q6001		MSB709	TRANSISTOR	1	<R>
Q6002		MSB710	TRANSISTOR	1	<R>
Q6003		2SD1051	TRANSISTOR	1	<R>
Q6004		2SB641	TRANSISTOR	1	<R>
Q6005,06		2SB819	TRANSISTOR	2	<R>
Q6007		2SD636	TRANSISTOR	1	<R>
Q6008		2SB790	TRANSISTOR	1	<R>
Q6009		MSD601	TRANSISTOR	1	<R>
QR2001		MRN1403	TRANSISTOR-RESISTOR	1	<R>
QR6003		UN2215	TRANSISTOR-RESISTOR	1	<R>
QR6004,05		MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR6006,07		UN2210	TRANSISTOR-RESISTOR	2	<R>
QR6008-12		MRN1402	TRANSISTOR-RESISTOR	5	<R>
R2001,02		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	2	
R2003-05		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	3	
R2006		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R2007		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R2008		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R2009		ERJ6GEYJ224	M.RESISTOR CH1/10W 220K	1	
R2010		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2011		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R2012,13		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R2014		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R2015		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2016		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R2017		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R2018,19		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	2	
R2020		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R2021		ERJ6GEYJ824	M.RESISTOR CH1/10W 820K	1	
R2022		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R2023		ERJ6GEYJ824	M.RESISTOR CH1/10W 820K	1	
R2024,25		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R2026		ERJ6GEYJ124	M.RESISTOR CH1/10W 120K	1	
R2027		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R2028		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2029		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R2030-32		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	3	
R2033		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2034		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2035		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	
R2036		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2037		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R2038		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2039		ERJ6GEYG334	M.RESISTOR CH1/10W 330K	1	
R2040		ERJ6GEYJ151	M.RESISTOR CH1/10W 150	1	
R2041		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2042,43		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	2	
R2044		ERJ6GEYJ822	M.RESISTOR CH1/10W 8.2K	1	
R2045		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2046		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R2047		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R2048		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R2049		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2050		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2051,52		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	2	
R2053-55		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	3	
R2056-58		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	3	
R2059-61		ERJ6GEYJ150	M.RESISTOR CH1/10W 15	3	
R2062		ERDS1TJ1R0	C.RESISTOR 1/2W 1.0	1	
R2063		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R2064		ERJ6GEYJ122	M.RESISTOR CH1/10W 1.2K	1	
R2065		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R2066		ERJ6GEYG752	M.RESISTOR CH1/10W 7.5K	1	
R2067		ERJ6GEYJ561	M.RESISTOR CH1/10W 560	1	
R2068,69		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R2070		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R2071,72		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	2	
R2073		ERX12ANJR47	M.RESISTOR 1/2W 0.47	1	
R2074		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R2075		ERJ6GEYJ331	M.RESISTOR CH1/10W 330	1	
R2076		ERJ6GEYJ393	M.RESISTOR CH1/10W 39K	1	
R2077		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2078		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R2079		ERG2ANJ101	M.RESISTOR 2W 100	1	
R2080		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
R2081		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R2082		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R2083,84		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R2085,86		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	2	
R2087		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R2088		ERJ6GEYJ513	M.RESISTOR CH1/10W 51K	1	
R2089,90		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	2	
R2091		ERJ6GEYJ683	M.RESISTOR CH1/10W 68K	1	
R2092		ERJ6GEYJ513	M.RESISTOR CH1/10W 51K	1	
R2093		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2094-98		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	5	
R2301,02		ERDS2TJ104	C.RESISTOR 1/4W 100K	2	
R2303		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R6001-04		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	4	
R6005-08		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	4	
R6009		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6010,11		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	2	
R6012,13		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	2	
R6014-27		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	14	
R6028-31		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	4	
R6032		VRE0034E683	M.RESISTOR CH1/10W 68K	1	
R6033		VRE0034E392	M.RESISTOR CH1/10W 3.9K	1	
R6034		VRE0034E153	M.RESISTOR CH1/10W 15K	1	
R6035		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6036-39		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	4	
R6040		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R6041		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6042		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R6043		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6044		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R6045		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R6046		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6047		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R6048		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6049		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6054		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R6055		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R6056		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R6057		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R6058		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R6059		ERJ6GEYJ823	M.RESISTOR CH1/10W 82K	1	
R6060		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6061		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6062		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R6063		ERJ6GEYJ224	M.RESISTOR CH1/10W 220K	1	
R6064		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6065		ERJ6GEYJ564	M.RESISTOR CH1/10W 560K	1	
R6066		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6067		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6068		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R6069		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6070		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R6071		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6072		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	
R6073-75		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	3	
R6076		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6077		ERD2FCG820	C.RESISTOR 1/4W 82	1	
R6078		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6079		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R6080		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6081		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R6082		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6083		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R6084		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6085		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R6086		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6087		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R6088		ERJ6GEYJ183	M.RESISTOR CH1/10W 18K	1	
R6089,90		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	2	
R6091		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R6092		ERJ6GEYJ182	M.RESISTOR CH1/10W 1.8K	1	
R6093		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R6094		ERQ12AJ2R7	F.RESISTOR 1/2W 2.7	1	
R6095		ERJ6GEYJ222	M.RESISTOR CH1/10W 2.2K	1	
R6096-00		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	5	
R6101,02		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	2	
R6103-08		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	6	
R6109		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
RY6001		VSY2041	RELAY	1	
SW2001		VSS0126	SWITCH	1	<R>
VR2001,02		EVN38CA00B54	V.RESISTOR 50K	2	
X2001		VSX0326	CRYSTAL OSCILLATOR	1	<R>
X6001		VSX0230	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
E62		VWJ0241	FLEXIBLE CABLE (24P)	1	P2005-P2901
E63		VSC1689	HEAT SINK	2	FOR IC2004,2005
E64		VMC0075	HEAT SINK SPRING	1	FOR IC2004
E65		VHN0011	RIVET	2	
E66		VMZ1577	SHIELD BARRIER	1	
E67		VMC0493	HEAT SINK SPRING	1	FOR IC2005
E72		VJF0818	CLAMPER	2	
	■	VEP02355A	REEL SERVO C.B.A.		
C2501		ECQV1H823J2	P.CAPACITOR 50V 0.082U	1	
C2502		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C2503		ECEA0JKN470	E.CAPACITOR 6.3V 47U	1	
C2504		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2505		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2506		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2507		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2508		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2509		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2510		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2511		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C2512		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C2513		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C2514		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C2515		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2516,17		ECEA0JK220	E.CAPACITOR 6.3V 22U	2	
C2518		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2519		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2520		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2521		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2522		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2523		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2524,25		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C2526-28		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C2529		ECEA1EK470	E.CAPACITOR 25V 47U	1	
C2530		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2531		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C2532		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2533		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2534		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2535,36		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C2537,38		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C2539,40		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C2541-43		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	3	
C2544		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2545		ECEA1EK470	E.CAPACITOR 25V 47U	1	
C2546		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2547		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C2549		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2550		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2551,52		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C2553,54		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C2556-58		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	3	
C2559		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2560-62		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C2578		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
D2501		MA151WK	DIODE	1	<R>
D2503		MA151K	DIODE	1	<R>
D2504		MA151WK	DIODE	1	<R>
D2506-08		MA151K	DIODE	3	<R>
IC2501		AN3621NK	IC	1	<R>
IC2502		MN15542VMU	IC	1	<R>
IC2503,04		AN3834K	IC	2	<R>
IC2505		MN1280R	IC	1	<R>
IC2506		LM358P	IC	1	<R>
IC2507		LM324N	IC	1	<R>
IC2508		MC14053BCP	IC	1	<R>
IC2509		LM393P	IC	1	<R>
IC2510		MC14053BCP	IC	1	<R>
IC2511,12		MC14069UBCP	IC	2	<R>
IC2513		LM393P	IC	1	<R>
L2501		VLQEL05F101K	COIL 100UH	1	
P2502		VJP1243T	CONNECTOR(MALE) 3P	1	
P2503		VJP1235R	CONNECTOR(MALE) 8P	1	
P2504		VJP1229T	CONNECTOR(MALE) 2P	1	
P2505,06		VJS1413	CONNECTOR(FEMALE) 15P	2	
P2507		VJP1232T	CONNECTOR(MALE) 5P	1	
Q2501		2SD636	TRANSISTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR2501-04		MRN1404	TRANSISTOR-RESISTOR	4	<R>
QR2505,06		MRN2404	TRANSISTOR-RESISTOR	2	<R>
QR2507		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR2508		UN2215	TRANSISTOR-RESISTOR	1	<R>
QR2509,10		MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR2511		UN2215	TRANSISTOR-RESISTOR	1	<R>
QR2512		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR2513,14		MRN2404	TRANSISTOR-RESISTOR	2	<R>
QR2515		MRN1402	TRANSISTOR-RESISTOR	1	<R>
R2501		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R2502,03		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	2	
R2504		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2505,06		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	2	
R2507		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	
R2508		ERJ6GEYJ224	M.RESISTOR CH1/10W 220K	1	
R2509		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R2510		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R2511		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R2512		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R2513		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2514,15		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R2516		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2517		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R2518		ERJ6GEYG222	M.RESISTOR CH1/10W 2.2K	1	
R2519		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2520		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2521		ERJ6GEYJ393	M.RESISTOR CH1/10W 39K	1	
R2522		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
R2523		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2524		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2525		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2526		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2527		ERJ6GEYJ823	M.RESISTOR CH1/10W 82K	1	
R2528		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2529		ERJ6GEYJ334	M.RESISTOR CH1/10W 330K	1	
R2530		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	1	
R2531		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	1	
R2532		ERJ6GEYG182	M.RESISTOR CH1/10W 1.8K	1	
R2533		ERJ6GEYJ224	M.RESISTOR CH1/10W 220K	1	
R2534		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2536		ERJ6GEYJ123	M.RESISTOR CH1/10W 12K	1	
R2537		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R2538		ERJ6GEYG363	M.RESISTOR CH1/10W 36K	1	
R2539		ERJ6GEYJ123	M.RESISTOR CH1/10W 12K	1	
R2540		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R2541		ERJ6GEYJ184	M.RESISTOR CH1/10W 180K	1	
R2542		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R2543		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R2544		ERJ6GEYJ221	M.RESISTOR CH1/10W 220	1	
R2545		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	1	
R2546		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R2547		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R2548		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R2549		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2550		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R2551-53		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	3	
R2554		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R2555		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2556		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R2557		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	1	
R2558		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2559		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	
R2560-63		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	4	
R2564		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2565,66		ERJ6GEYJ223	M.RESISTOR CH1/10W 22K	2	
R2567,68		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	2	
R2569		ERJ6GEYG222	M.RESISTOR CH1/10W 2.2K	1	
R2570,71		ERJ6GEYG223	M.RESISTOR CH1/10W 22K	2	
R2572		ERJ6GEYG182	M.RESISTOR CH1/10W 1.8K	1	
R2574		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2575,76		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R2577		ERJ6GEYJ105	M.RESISTOR CH1/10W 1M	1	
R2578,79		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R2580		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2581		ERDS2TJ1R0	C.RESISTOR 1/4W 1.0	1	
R2582		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R2583		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2584		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R2585		ERJ6GEYJ562	M.RESISTOR CH1/10W 5.6K	1	
R2586		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2587		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R2588		ERJ6GEYJ272	M.RESISTOR CH1/10W 2.7K	1	
R2589		ERJ6GEYJ392	M.RESISTOR CH1/10W 3.9K	1	
R2591,92		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	2	
R2593		ERJ6GEYJ221	M.RESISTOR CH1/10W 220	1	
R2594		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R2595		ERDS2TJR56	C.RESISTOR 1/4W 0.56	1	
R2596		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	1	
R2597		ERJ6GEYJ563	M.RESISTOR CH1/10W 56K	1	
R2598		ERJ6GEYJ393	M.RESISTOR CH1/10W 39K	1	
R2599		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R2600		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2602,03		ERJ6GEYJ330	M.RESISTOR CH1/10W 33	2	
R2604		ERJ6GEYJ221	M.RESISTOR CH1/10W 220	1	
R2605		ERJ6GEYJ104	M.RESISTOR CH1/10W 100K	1	
R2607		ERJ6GEYG202	M.RESISTOR CH1/10W 2K	1	
R2608		ERJ6GEYG152	M.RESISTOR CH1/10W 1.5K	1	
RA2501,02		EXBLD4103G	COMBI. R-R	2	
X2501		VSX0082	CRYSTAL OSCILLATOR	1	<R>
	■	VEP06632A	MODE SELECT C.B.A.		
C6501		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
IC6501		MC14051BCP	IC	1	<R>
P6501		VJP1410	CONNECTOR(MALE) 20P	1	
R6501		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R6502-10		ERDS2TJ473	C.RESISTOR 1/4W 47K	9	
SW6501-04		VSS0162	SWITCH	4	<R>
SW6506		VSS0162	SWITCH	1	<R>
SW6508-12		VSS0126	SWITCH	5	<R>
VR6501		EVUE3AH20B15	V.RESISTOR 100K	1	
VR6502		EVN32CA00B54	V.RESISTOR 50K	1	
	■	VEP06621A	FRONT (1) C.B.A.		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6601		LN38GCPPSVT	LED	1	<R>
D6602,03		VLL0030	LED	2	<R>
D6604-07		LN38GCPPSVT	LED	4	<R>
P6601		VJP1393T	CONNECTOR(MALE) 13P	1	
P6602		VJP1233T	CONNECTOR(MALE) 6P	1	
P6603		VJP1231T	CONNECTOR(MALE) 4P	1	
R6601-07		ERDS2TJ561	C.RESISTOR 1/4W 560	7	
R6609		ERDS2TJ564	C.RESISTOR 1/4W 560K	1	
R6610		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6611		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R6614		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R6615		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6616		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6618		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R6619		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6620		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
SW6601		EVQQSB05G	SWITCH	1	<R>
VR6601,02		EVUF3AS01A14	V.RESISTOR 10K	2	
VR6603,04		EVUF3AS01B24	V.RESISTOR 20K	2	
			MISCELLANEOUS		
E40		VMX1796	LED SPACER	1	
E41		KL02	LED SPACER	3	
E42		VJF0825	LED HOLDER	1	
E43		TJC6319	FUSE HOLDER	2	<R><!>
E44		VSE0036	HOUR METER	1	
	■	VEP06622A	FRONT (2) C.B.A.		
P6701		VJP1878T	CONNECTOR(MALE) 8P	1	
R6701-03		ERDS2TJ102	C.RESISTOR 1/4W 1K	3	
R6704		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R6705		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
			MISCELLANEOUS		
E51		VJR0399	TEST TERMINAL	6	
	■	VEP04288B	MODULAR JACK C.B.A		
CA4801		EXFP6102ZW	COMBI. C-C	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P4801		VJP2844	CONNECTOR(MALE) 6P	1	
P4802		VJP1246T	CONNECTOR(MALE) 6P	1	
	■	VEP06626A	9P CONNECTION C.B.A.		
P6801		VJP1249T	CONNECTOR(MALE) 9P	1	
			MISCELLANEOUS		
E49		VJS2074	CONNECTOR 9P	1	
	■	VEP06625B	REMOTE CONTROL JACK C.B.A.		
C6901,02		ECKF1H102KB	C.CAPACITOR 50V 1000P	2	
D6901,02		MA165	DIODE	2	<R>
P6901		VJP1231R	CONNECTOR(MALE) 4P	1	
QR6901		UN1112	TRANSISTOR-RESISTOR	1	<R>
R6901		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
			MISCELLANEOUS		
E48		VJJ0268	JACK	1	
	■	VEP01404A	POWER CONNECTION (1) C.B.A.		
C1201		ECEA1VU331	E.CAPACITOR 35V 330U	1	
C1216,17		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
IC1202		AN7812	IC	1	<R>
P1201		VJP1236R	CONNECTOR(MALE) 9P	1	
P1202		VJP1232R	CONNECTOR(MALE) 5P	1	
R1201		ERQ12HJ3R9P	F.RESISTOR 1/2W 3.9	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
E52		VSC1068	HEAT SINK	1	
	■	VEP01405A	POWER CONNECTION (2) C.B.A.		
C1202		ECEA1VU331	E.CAPACITOR 35V 330U	1	
C1203		ECEA1VU470	E.CAPACITOR 35V 47U	1	
C1204		ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	
C1205		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C1206		ECKF1H561KB	C.CAPACITOR 50V 560P	1	
C1207		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C1208-10		ECEA1HK010	E.CAPACITOR 50V 1U	3	
C1211		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1212,13		ECEA1EU221	E.CAPACITOR 25V 220U	2	
C1214		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1215		ECEA1CK101	E.CAPACITOR 16V 100U	1	
D1201		MA4100M	DIODE	1	<R>
D1202		MA4110	DIODE	1	<R>
D1203.04		11EQS04	DIODE	2	<R>
IC1201		BA6149LS	IC	1	<R>
L1201,02		VLQ0129	COIL 300UH	2	
Q1201		2SD1275	TRANSISTOR	1	(P,Q,R)<R>
Q1202,03		2SB772	TRANSISTOR	2	(P,Q,R)<R>
R1202		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R1203		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R1204,05		ERDS2TJ154	C.RESISTOR 1/4W 150K	2	
R1206		ERX12SJR82	M.RESISTOR 1/2W 0.82	1	
R1207		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R1208		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R1209		ERX12SJR82	M.RESISTOR 1/2W 0.82	1	
R1210		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R1211		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
X1201		VSX0136	CRYSTAL OSCILLATOR	1	<R>
			MISECLLANEOUS		
E34		VSC2761	SHIELD CASE (UPPER)	1	
E35		VSC2762	SHIELD CASE (MIDDLE)	1	
E36		VSC2763	SHIELD CASE (LOWER)	1	
	■	VEP01440A	SW POWER (1) C.B.A.		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1003,04		VCK0039	C.CAPACITOR	2	
C1005		ECOS2GA820AA	E.CAPACITOR 400V 82U	1	
C1006		ECQE6473JZ	P.CAPACITOR 630V 0.047U	1	
C1007		ECKD3D331KBN	C.CAPACITOR 2KV 330P	1	
C1008		ECQB1H682JZ	P.CAPACITOR 50V 6800P	1	
C1009		ECEA2GG010	E.CAPACITOR 400V 1U	1	
C1010		ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C1011		ECQV1H105JZ	P.CAPACITOR 50V 1U	1	
C1012		ECEA1HFE560	E.CAPACITOR 50V 56U	1	
C1013		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C1014		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1015		ECQP1101JZ	P.CAPACITOR 100V 100P	1	
C1016		ECEA1HGE101	E.CAPACITOR 50V 100U	1	
C1017		ECA1VFQ391	E.CAPACITOR 35V 390U	1	
C1018		ECA1VFQ221	E.CAPACITOR 35V 220U	1	
C1019		ECA1AFZ681	E.CAPACITOR 10V 680U	1	
C1020		ECA1VFQ681	E.CAPACITOR 35V 680U	1	
C1021		ECEA1DPS681X	E.CAPACITOR 20V 680U	1	
C1022		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1023		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1024,25		ECEA1AGE101	E.CAPACITOR 10V 100U	2	
C1026		ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1029		ECQU2A224MN	P.CAPACITOR 100V 0.22U	1	
D1001		S1WBA60	DIODE	1	<R>
D1002		VSD0002	DIODE	1	<R>
D1003		AP01C	DIODE	1	<R>
D1004		MA4030L	DIODE	1	<R>
D1005		MA165	DIODE	1	<R>
D1006		MA178	DIODE	1	<R>
D1007		ERA22-02	DIODE	1	<R>
D1008		RL42PLF	DIODE	1	<R>
D1009		FMLG12SP	DIODE	1	<R>
D1010		31DQ04FC6	DIODE	1	<R>
D1011		MA2200B	DIODE	1	<R>
F1002		XBA2C12TB0	FUSE	1	<!><R>
IC1001		STRD6008X	IC	1	<R>
IC1002		STK5391	IC	1	<R>
IC1003		SE013E	IC	1	<R>
L1002		VLQ0335	COIL	1	
L1003		VLQ0354	COIL	1	
P1001		VJP1248T	CONNECTOR(MALE) 8P	1	
Q1001		PC111	PHOTO COUPLER	1	<R>
R1003,04		ERDS1TJ563	C.RESISTOR 1/2W 56K	2	
R1005,06		ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R1007		ERG3ANJ683	M.RESISTOR 3W 68K	1	
R1008		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1009		ERD2FTVG681	C.RESISTOR 1/4W 680	1	
R1010		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R1011		ERG2SJ330	M.RESISTOR 2W 33	1	
R1012		ERG3SJ270	M.RESISTOR 3W 27	1	
R1013		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1014		ERQ12HJ680	F.RESISTOR 1/2W 68	1	
R1015		ERG1SJ182	M.RESISTOR 1W 1.8K	1	
R1016		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
T1001		VLT0620	TRANSFORMER	1	<!><R>
TH1001		VRT0028	THERMISTOR	1	
			MISCELLANEOUS		
E56		VJF0318	FUSE HOLDER	2	<!><R>
E77		VMZ0965	CAPACITOR COVER	1	<!><R>
E78		VMZ1305	CAPACITOR COVER	1	<!><R>
	■	VEP01441A	SW POWER (2) C.B.A.		
C1001		ECQU2A823MN	P.CAPACITOR 100V 0.082U	1	
C1027,28		VCK0045	C.CAPACITOR 250V 1500P	2	
F1001		XBA2C20TB0	FUSE	1	<!><R>
L1001		ELF18D423	COIL	1	
			MISCELLANEOUS		
E57		VJF0318	FUSE HOLDER	2	<!><R>
E58		VMZ0429	FUSE COVER	1	<!><R>
E59		VMZ0965	CAPACITOR COVER	2	<!><R>
E60		VMZ1305	CAPACITOR COVER	1	<!><R>
E61		VMZ1290	TERMINAL COVER	2	<!><R>
	■	VEP05151C	HEAD AMP C.B.A.		
C5501,02		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5503		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5504		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5505,06		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5507		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C5508		ECEA1CKS220	E.CAPACITOR 16V 22U	1	
C5509		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C5510		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5511		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5512		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5513		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5515		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C5517		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C5518		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5520		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5521		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5525,26		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5528		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C5529		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
C5531		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
C5533,34		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	2	
C5551		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5552		ECEA1AKA470	E.CAPACITOR 10V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5553-58		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C5559		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5560		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5561,62		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	2	
C5563,64		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C5565		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5566		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
D5501		MA151K	DIODE	1	<R>
IC5501		AN3334K	IC	1	<R>
IC5551		BA7740FS	IC	1	<R>
L5501		VLQEL05F101K	COIL 100UH	1	
L5502		VLQEL05F330K	COIL 33UH	1	
L5551,52		VLQEL05F101K	COIL 100UH	2	
P5501		VJP1250T	CONNECTOR(MALE) 10P	1	
P5502		VJS1927	CONNECTOR(FEMALE) 10P	1	
P5551		VJP1247T	CONNECTOR(MALE) 7P	1	
Q5501		MSB709	TRANSISTOR	1	<R>
R5501		ERJ6GEYJ472	M.RESISTOR CH1/10W 4.7K	1	
R5502		ERJ6GEYJ101	M.RESISTOR CH1/10W 100	1	
R5503		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R5504		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
R5505		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	1	
R5506,07		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	2	
R5508		ERJ6GEYJ471	M.RESISTOR CH1/10W 470	1	
R5510		ERJ6GEYJ100	M.RESISTOR CH1/10W 10	1	
R5511		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R5512		ERJ6GEYJ100	M.RESISTOR CH1/10W 10	1	
R5513		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R5514		ERJ6GEYJ331	M.RESISTOR CH1/10W 330	1	
R5516-18		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	3	
R5551		ERJ6GEY0R00	M.RESISTOR CH1/10W 0	1	
R5552		ERJ6GEYJ333	M.RESISTOR CH1/10W 33K	1	
R5553		ERJ6GEYJ103	M.RESISTOR CH1/10W 10K	1	
R5554		ERJ6GEYG243	M.RESISTOR CH1/10W 24K	1	
R5555		ERJ6GEYJ391	M.RESISTOR CH1/10W 390	1	
R5556		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R5557,58		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	2	
R5559		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R5560		ERJ6GEYJ153	M.RESISTOR CH1/10W 15K	1	
R5561		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R5562,63		ERJ6GEYJ152	M.RESISTOR CH1/10W 1.5K	2	
R5564		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	1	
R5565		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R5566		ERJ6GEYJ100	M.RESISTOR CH1/10W 10	1	
VR5501,02		EVN32CA00B13	V.RESISTOR 1K	2	
			MISCELLANEOUS		
E45		VSC3119	SHIELD CASE (MIDDLE)	1	
E46		VSC3040	SHIELD CASE (REAR)	1	
E47		VSC3039	SHIELD CASE (FRONT)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEPO6627B	REAR JACK (1) C.B.A.		
J6201		VJJ0253	JACK	1	
J6202,03		VJJ0251	JACK	2	
P6201		VJP1879T	CONNECTOR(MALE) 8P	1	
P6202		VJP1877T	CONNECTOR(MALE) 6P	1	
	■	VEPO6628B	REAR JACK (2) C.B.A.		
J6301-04		VJJ0083	JACK	4	
P6301		VJP1879T	CONNECTOR(MALE) 8P	1	
P6302,03		VJP1874T	CONNECTOR(MALE) 3P	2	
R6301		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
SW6301		VSS0297	SWITCH	1	<R>
			MISCELLANEOUS		
E50		VMP2647	ANGLE	1	
	■	VEPO6630B	34P CONNECTION C.B.A.		
C6551		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C6553		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
CA6551,52		EXFP4102ZW	COMBI. C-C	2	
CA6553		EXFP6102ZW	COMBI. C-C	1	
FL6551		VLF0630	FILTER	1	
P6551		VJP1251T	CONNECTOR(MALE) 11P	1	
P6552		VJP1246T	CONNECTOR(MALE) 6P	1	
			MISCELLANEOUS		
E37		VSC1327	CONNECTOR (34P)	1	
E38		VMX0674	SPACER (34P)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEPO1407B	AC LINE CONNECTION C.B.A.		
C1101,02		ECQU2A224MN	P.CAPACITOR 100V 0.22U	2	
L1101		ELF18D624F	COIL	1	
P1101		VJP2639	CONNECTOR(MALE) 4P	1	
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	
			MISCELLANEOUS		
E53		VMP2645	ANGLE	1	
E54		VMP2646	ANGLE	1	
E55		VJF0867	CONNECTOR SPACER	1	
E74		VMZ1305	CAPACITOR COVER	2	<!><R>
E75		SJT777	TERMINAL	2	
E76		VMZ1664	LINE FILTER COVER	1	
	■	VEP00P76A	MOTOR BASE C.B.A.		
C20001		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C20002		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C20003		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C20004		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C20005		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
IC20001		UPC358G2	IC	1	<R>
P20001		VJS1441	CONNECTOR(FEMALE) 24P	1	
P20002		VJS1685	CONNECTOR(FEMALE) 15P	1	
P20006		VJP1232T	CONNECTOR(MALE) 5P	1	
P20007		VJP1229G	CONNECTOR(MALE) 2P	1	
R20001		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R20002		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R20003		ERJ6GEYJ474	M.RESISTOR CH1/10W 470K	1	
R20004		ERJ6GEYJ102	M.RESISTOR CH1/10W 1K	1	
R20005		ERJ6GEYJ473	M.RESISTOR CH1/10W 47K	1	
R20006		ERJ6GEYJ474	M.RESISTOR CH1/10W 470K	1	
R20007-10		ERJ6GEYJ332	M.RESISTOR CH1/10W 3.3K	4	
	■	VEK2657	TENSION DETECTOR UNIT		
Q1504		ON1301	PHOTO INTERRUPTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1502		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
	■	VEK3578	PHOTO TR. (L) UNIT		
C1501		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
Q1501		PN150NVS	PHOTO TR.	1	<R>
			MISCELLANEOUS		
E68		VMD0645	PHOTO TR. HOLDER	1	
	■	VEK4058	PHOTO TR. (R) UNIT		
C1502		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
P1508		VJS2165W	CONNECTOR(FEMALE) 6P	1	
Q1502		PN150NVS	PHOTO TR.	1	<R>
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
E69		VMD0645	PHOTO TR. HOLDER	1	
	■	VEP00Q72A	ID DUMMY C.B.A.		
P3551		VJP1231B	CONNECTOR(MALE) 4P	1	
P3554		VJP1232G	CONNECTOR(MALE) 5P	1	

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